BUTANE-PROPANE News

HEADQUARTERS FOR LP
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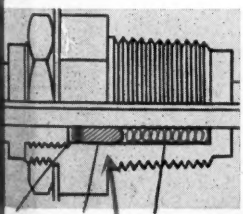

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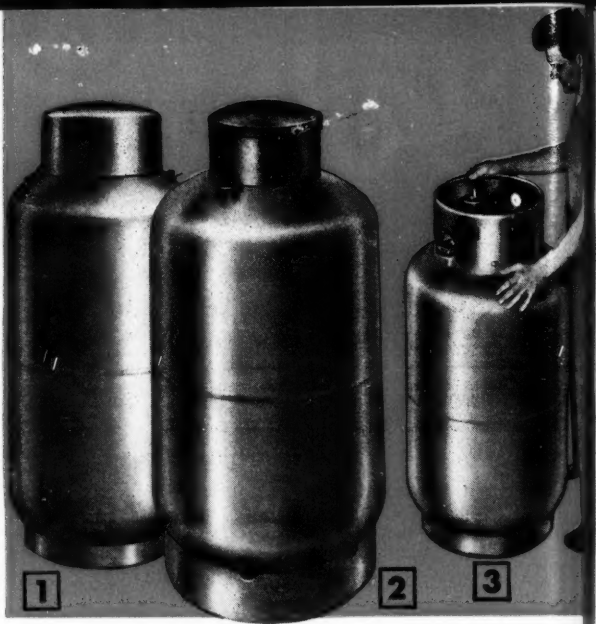

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MARCH, 1952

BUTANE-PROPANE News

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CONTENTS

Controlled Heat is Answer to Successful Chicken Brooding.....*Carl Abell* 57

Cooking for Profit.....*Tracy B. Madole* 61

Light Hydrocarbon Production Going Up Again in '52..... 68

Industrial Loads the Dealer Can Sell..... *G. R. Van Kampen* 70

Practical Management of an L. P. Gas Business, Chapter 12. The Price of Gas *C. C. Turner* 76

How LPG Distributors React to National Advertising Campaign 104

M. E. McKay Wins Bastian-Blessing Picture Contest 118

Million Mile Taxi Record.....*Carl Abell* 122

•

Letters 47

Comment 51

Beyond the Mains..... 53

Associations 94

Calendar 102

Products 112

Power 122

The Trade 140

Classified 156

Advertisers' Index 159-160

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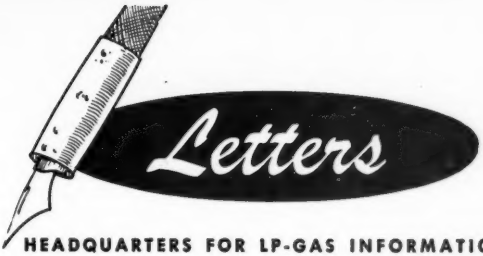

HEADQUARTERS FOR LP-GAS INFORMATION SINCE 1931

QUEBEC, CANADA

Would you please advise me if a skid tank of 540 w.g., securely bolted to body of a truck, could be used to transport propane from refinery to my place of business; then removed to rack built for it and fill cylinders from it? I would not have use for two trucks as my business is all in 100-lb. cylinders. According to NBFU Pamphlet 58, it seems it can be used this way.

C.G.

This is frequently done and there is no regulation against it that we know of, the most important consideration being that you anchor the skid tank securely to your truck and again to its stationary position. Apparently you have provided for this, according to your letter.—Ed.

●

NEBRASKA

Please tell us how much we would have to plane from the head of a 1950 Plymouth to get the best mileage and performance out of propane. What would the compression ratio be?

R.A.N.

The best all-around satisfaction can be obtained in making a propane conversion on the recent Plymouth automobiles by planing the head 1/16 inch.

This gives a compression ratio of approximately 7.75:1, with satisfactory performance and economy, and somewhat longer life than is obtained by further raising the compression ratio.

With this treatment, the engine should outlast the standard job running on gasoline. The crankcase oil should contain minimum detergent, and results will be better if SAE 20 weight is used for refills. If the oil appears to thicken in service, which is quite likely, lighter weight should be used for any additions which are required between drains.—Ed.

●

MICHIGAN

I am particularly interested in the inquiry from Missouri which appears in the "Letters" section of the November issue of BUTANE-PROPANE *News*. It is apparent that the inquirer occasionally, perhaps frequently, engages in repair to these pressure vessels by cutting and welding.

Perhaps we in the insurance business should be more concerned than we have evidenced in the matter of promiscuous repairs of this sort. The NBFU standards as outlined in Pamphlet 58, as well as the ASME and the ICC standards, are very explicit and rightfully particular in this matter of welding on pressure vessels.

In addition to the inquirer, the editor states that he knows of several companies who repair, cut and weld both gasoline and L. P. gas storage tanks. It is, of course, of basic importance that operations of this type should be performed only by a concern fully equipped for such operations, including complete facilities for

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● **BUTANE-PROPANE NEWS welcomes letters from our readers, but it must be understood that this magazine does not necessarily concur in opinions expressed by them.—Editor.**

inspection and testing of the vessel after repairs have been completed. Tank manufacturers would, of course, be fully equipped for work of this sort and are in a position to fulfill all of the requirements of the ASME or the API-ASME. Many others might have adequate facilities for doing the actual welding, yet would not be qualified to make proper repairs on vessels of this type.

Your comments regarding the purging of tanks prior to welding are very interesting, but of greater interest at the moment is the possibility that many concerns, not properly qualified to perform work of this nature, may occassionally engage in a repair of this type. What are your thoughts in this matter, and in your experience do you believe that this may be worthy of some special attention?

D. S. Firth,
Standard Accident Insurance Co.,
Detroit.

Only companies and/or personnel with proper equipment and certified to do work on ASME or API-ASME vessels should undertake to alter these vessels in any way. No welding, brazing, or similar work shall be done on the shell of a pressure vessel. Such action is cause for voiding the original test and data sheets for that pressure vessel.

Whenever such work is done it must be done by personnel certified to do the work and then complete tests and inspection of the vessel made in the approved manner by a competent and certified inspection authority after which new data sheets for the vessels will be issued. Even tack-welding or brazing a small leg to the shell or head of a code pressure vessel is prohibited.

If it is necessary to attach some support, bracket or other device, attach it to a saddle pad or to some part which is not an actual part of the vessel shell but which was a part of the original vessel and which was attached to the shell when it was built and before final tests were made.—Ed.

KANSAS

I have a factory in which I intend to install a 330,000 and a 440,000 Btu furnace which makes the total load 770,000 Btu input. Can this be operated from a 1000-gallon propane tank with a high pressure regulator at the tank and low pressure regulator at the building? What kind of performance can I expect on this job with this set up? Also, what pressure should I use on the high pressure line?

C.B.

A 1000-gal. tank would not have sufficient vaporizing capacity in your locality to supply the 770,000 Btu load you are considering. Even with two tanks in service and kept half full of fuel, there would be times when the temperature fell below -10 or -15°F at which time they would not be able to deliver adequate vapor.

The most satisfactory service would be supplied by using a vaporizer during the coldest months.

About 5-lb. pressure from the regulator at the tanks should be most satisfactory for the service you contemplate.

Be sure your secondary, or low pressure regulators are large enough to handle the required flow at this low inlet pressure. —Ed.

●

NEW YORK

Re: "Comment," p. 39, January, 1952, issue of BUTANE-PROPANE *News*.

In the second paragraph under "Co-operative Organizations," you state "and what hurts most is that it (co-operative organizations' volume) is not government-taxed for the same operations as L. P. gas dealers perform—but are taxed."

For your information, the Cooperative G.L.F. Exchange Inc., of Ithaca, N. Y., owns and operates several L. P. gas distribution services (that is why I take your publication) and is a tax-paying cooperative. Our federal income tax for the past fiscal year was in excess of $1,700,000.

I believe that a correction to your

all-inclusive statement is in order to be fair to the G.L.F. and the numerous other tax-paying farm cooperatives.

W. S. Miller,
G.L.F. Farm Supplies,
Ithaca, New York.

Please explain why it is that your firm is paying a character of government tax that other cooperatives do not pay.—Ed.

In 1947 the farmer stockholders of G.L.F. decided that the disadvantages of operating under the agricultural cooperative tax law were more than offsetting the advantages.

The two outstanding advantages of changing G.L.F. operations to a taxable corporation basis are:

1. Confines patronage refunds to bona-fide farmers only.

2. Opportunity to increase reserves for operating capital (after payment of income taxes).

Many of the other large farm cooperatives have made similar changes in their fiscal operations in the past five years.

W. S. Miller.

While you may still be a cooperative organization, apparently you do not come under our original criticism regarding cooperatives which do not pay taxes. Our criticism is of the many cooperatives in this country that do not pay a tax comparable to that paid by the independent LPG dealers and yet do a huge volume of business in competition with those dealers.—Ed.

●

NORTH DAKOTA

We have some propane storage tanks that were bent in shipping, ends dented.

Can't see that the damage is extensive enough to affect the strength of the tanks in any way.

However we are concerned that they may be inspected at some time.

Would we be adequately covered in this event if we hydrostatically test these tanks to the required pressure?

J.T.

It is difficult to advise on your problem without seeing the tanks which were damaged. Probably on some the dent would not cause trouble, while on others there may be damage inflicted in such a way as to weaken the steel on the welds. We suggest you contact your supplier about this damage or have them tested.

If it is not already too late, we suggest you file a claim with the carrier so that you will be protected in case some of the tanks need repair work.—Ed.

●

TENNESSEE

We want to heat a baptistery for a church which holds around 600 gallons of water. Can you give us information on a heater for this purpose? Also what effect would vented or unvented heaters have on canary birds?

P.G.C.

Although it may seem a little crude, we believe a stock tank heater would do this job quite well.

Another suggestion is to use a small circulating pump to draw water from the baptistery and force it through an instantaneous type, or a side-arm type, water heater and back into the tank. Such a unit could be economically assembled with hose for setting it and removing as desired. If conditions are suitable, a side-arm type heater could be installed below water level of the baptistery and natural circulation would cause the water to move through the heater the same as on a hot water storage tank.

Vented heaters should have no effect on canary birds. Unvented heaters, of course, will delete the oxygen supply and will, if the room in which they are located is not properly ventilated, produce some carbon monoxide after being in operation for some time. Unvented heaters should never be operated in a room without ventilation.—Ed.

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-SURE!

IT'S always a good subject to discuss—larger volume sales. There are none easier to develop and few more profitable than commercial and industrial applications.

Some dealers shy away from these accounts because they believe them hard to sell, and often get in the rut of thinking only in the category of domestic installations.

But every small town in every dealer's territory offers some opportunity to sell a restaurant or hotel or hospital or school or bakery or greenhouse or factory or gin or kiln or dehydrator plant or a score of other businesses, any one of which may conceivably use as much fuel as from five to 20 domestic customers. And the load goes on year after year, with few service obligations, and usually no collection problems.

The beauty of commercial and industrial applications is that hardly a one exists that cannot use gas more profitably and more conveniently than any other fuel. It is so easy to prove your product to them, so compensating to make such contracts! If you don't believe it, read articles in this issue on both commercial and industrial selling. They will help you if you are pursuing these fields, and may inspire you to enter them if overlooked or ignored heretofore.

Make all the domestic sales you can, but don't pass up the volume business in your own home town.

The first domestic gas cooking range on record was made by an Englishman named James Sharp in 1832, although cooking over individual jets of flame or by gas rings had been done years before this.

Gas was not used for cooking to any extent in the United States until 1859. Even as late as the Centennial Exposition in Philadelphia in 1873, gas ranges attracted much attention as an innovation.

Today it is estimated that about 30,000,000 families use utility gas or L. P. gas for residential applications.

•

Preliminary tests of a new process resulting in better fuel and engine performance of internal combustion engines has been announced by Robert S. Wallach, president of Associated Development and Research Corp., New York, says the "Petroleum Marketer."

The new process is the invention of Dr. Sophia Berkman, a recognized authority on catalysis. In Dr. Berkman's process, a synthetically compounded catalyst is cast in the cylinder head or piston. This tends to prevent carbon formation and the destructive impact of knock or "ping." The new catalyst among its other functions assists in more complete combustion within the cylinder and thereby reduces the need for higher octane gasoline.

You mean, Doctor, competition for propane?

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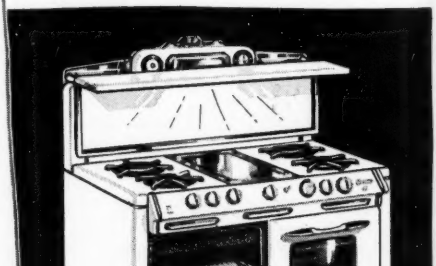

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SAFETY standards for domestic gas appliances have been raised to an amazing extent in the past 25 years, according to the American Gas Assn. No other major industry in the world has set up such a system for steadily improving appliances by constant elevation of safety and performance standards, the AGA states.

Although national standards for nuts and bolts, wiring and other materials and parts are common, few industries have adopted nation-wide standards for finished products. The gas industry was the first to establish its own testing laboratories for the benefit of the consuming public and to develop its own national standards for large and important household items like ranges, water heaters, refrigerators, and house-heating furnaces.

Maintain Rigid Standards

Nearly 50,000 models of gas appliances have been tested and periodically inspected since establishment of the AGA Laboratories in 1925. More than 30 types of appliances and accessories are now tested and approved by the Laboratories in Cleveland and Los Angeles. These tests get tougher and tougher as standards are advanced to keep in step with technological progress and developments.

The ordinary 5-cent piece buys very little today, but it is still big enough, the report shows, to insure safety in a gas appliance. Laboratory engineers estimate that it costs only about 5 cents per appliance produced for all testing and inspection services necessary to determine its compliance with national standards.

600 Tests Per Range

As many as 600 tests are performed on today's modern gas range to insure safety, good performance and sound engineering. Manufacturers must submit models of their appliances for approval to the Laboratories before they can display the AGA Approval Seal. This registered symbol identifies all approved gas appliances.

All tests for approval are made in accordance with published standards sponsored by the gas industry and adopted by the American Standards Assn. Granting of approval by test is only the beginning. Even after approval, rigid inspections are made of models on the assembly line to make sure all standards are being complied with on current production.

So successful is this program that many states and municipalities will not permit installation of gas appliances which do not bear the AGA Seal of Approval. Agencies merchandising appliances as well as the gas consuming public universally insist on approved models. Association officials state that better than 95% of

all gas appliances in use today bear the seal. This symbol and the program it represents afford important protection to the health and welfare of the industry's more than 30 million customers.

Of this number, approximately 8 million use L. P. gas for fuel.

•

We have mentioned taxicab conversions (from gasoline to LPG) on previous occasions, with full faith that they offer a particularly potent proving ground and demonstration of the advantages of propane carburetion. How right we were!

In this month's power department we present a summary of the experience of the Santa Monica Cab Co. The records show a total of almost a million miles of operation in one year on 10 vehicles, consuming nearly 100,000 gallons of propane.

They had a little trouble, but most of it was not with engines. In the year's operation, they never ground a valve or rebored a cylinder. Without major engine alterations they saved money on fuel cost, with a differential of only 4 cents per gallon, paid off their conversion cost, and saved hundreds of dollars on maintenance. And their cabs turned in extra revenue because of less interruption of service.

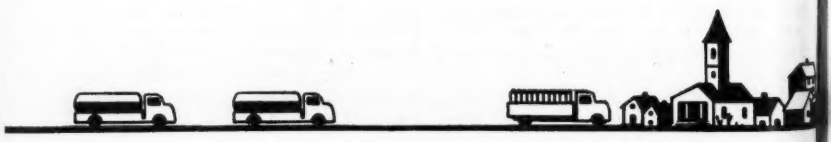
Taxicabs are among the easiest conversions to sell—they pay off the conversion cost quickly, proving the maintenance advantages at the same time. And the American Taxicab Assn. is actively promoting the use of propane by the industry—conditioning your prospects for you in advance. We suggest that you give particular atention to this opportunity.

•

Southern fried chicken has not only gone north, it is all over the country. More fryers and broilers are being consumed than ever before. "Meat chickens" can be produced at lower cost than beef, and they can be raised almost anywhere. Space requirements are small, so the industry will fit into almost any rural or farm community. It does not depend on climate, local production of feed, or proximity to major markets.

The requirements for fuel are larger in relation to output than in almost any other agricultural activity —and the ideal fuel is L. P. gas. Depending on severity of climate and the method of brooding employed, each one-man production unit of 5000 or 6000 bird capacity consumes 2000 or more gallons of fuel per year—the equivalent of several average domestic installations. This makes for large dumps and low delivery cost.

Lumber dealers, feed merchants, and bankers will be interested in seeing more of these "meat factories" established in your community. Why not let them see the article on the broiler industry in this issue, and have them promote some extra business for themselves and your company?



Controlled Heat is Answer To Successful Chicken Brooding

By CARL ABELL

WE do not yet "manufacture" meat, but the production of fryers and broilers for market is coming very close to that objective. It is a quantity production operation, employing the same principles that have been adapted for the manufacture of most of the inanimate articles of commerce. To a surprising extent, the broiler industry is becoming mechanized. Even the production plants, which correspond to the buildings and machinery in factories, are approaching standardization.

One of the indispensable elements of the operation is controlled heat during the first few weeks of the chicken's life. In the now vanishing natural method of production, the hen provided the heat. In today's method, the heat comes from an L. P. gas tank sitting in the "factory" yard. It is developed and applied through burners located in "hovers," or space heaters in the brooder, or under a boiler which heats the floor of the brooder house by supplying circulating hot

Photo: Metered gas tank at the Ainsworth brooder plant on the Mojave Desert, near Lancaster, Calif.

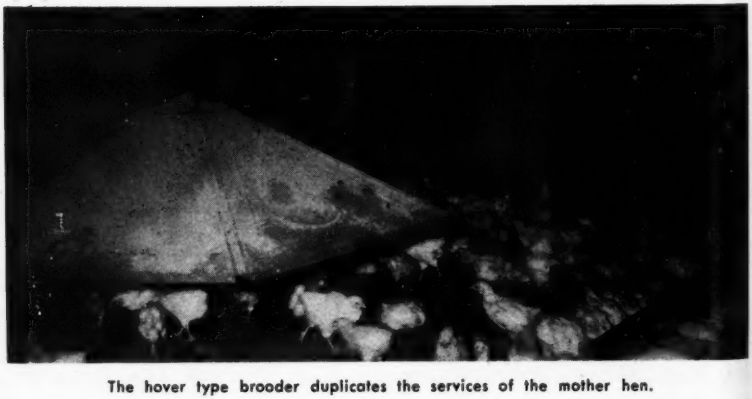
water through pipes embedded in a concrete slab. In any case, the control of heat is automatic.

The market for broilers and fryers is everywhere. "Southern fried chicken" has gone north in a big way and broiler plants can be operated profitably in almost every part of the United States where an economical supply of feed can be obtained.

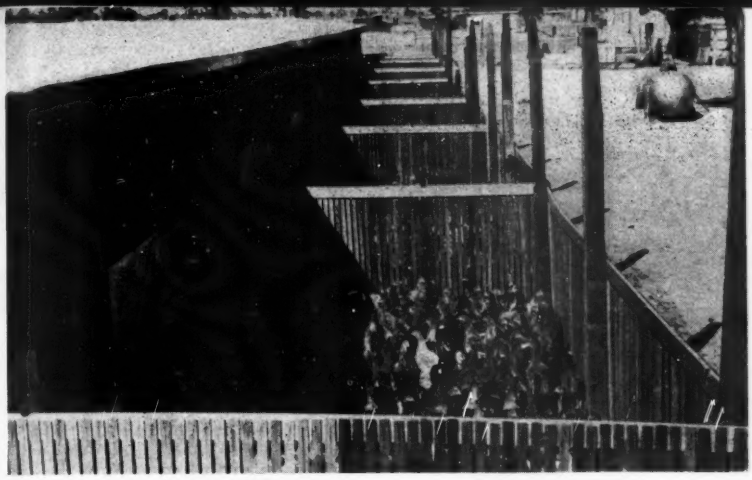
The broilers are raised in houses, crowded close together, so tremendous output can be secured in very little space. It is not exactly a city-lot industry, but a suburban location does very well. In fact, a great many of the broiler plants scattered throughout the United States are located in the outskirts of cities and towns, generally outside the range of any local gas utility system, where the most convenient and economical fuel is liquefied petroleum gas.

There are a large number of metropolitan and industrial areas where the local production of "meat chickens" falls far short of the demand. The excess supply is generally shipped in from one or more of a number of areas where extensive production for shipment is carried on. These production centers are scattered, apparently without rhyme or reason. One would expect them to be located in the central farm belt, near the greatest source of supply of the basic foods —corn, wheat, and alfalfa.

While large production areas do occur in the Midwest, the proximity of unlimited food is not the sole reason governing the location of these large broiler production areas. The Antelope Valley, in southern California, which includes a large part of the Mojave desert, has developed a thriving and tremendous "meat chicken" industry. The determining factor in these locations does not appear to be



The hover type brooder duplicates the services of the mother hen.



Standardized brooder plant which turns out 5000 fryers at a batch.

economic. It seems to be the human being element. The industry has grown up around individuals with exceptional organizing ability.

The Antelope valley production of over 10,000,000 birds per year comes from about 750 farms located in a rather narrow belt from Frazer Mountain to Adelanto, a distance of about 70 miles. The greatest concentration is close to the towns of Lancaster and Palmdale. There are few large plants employing outside help—most of them are one-man deals, with productive capacity of between 5000 and 6000 chickens at a time. Standardized plants have been developed which permit the maximum production with minimum labor.

Thermostatic temperature control, automatic drinking water supply systems, and continuous feeders, reduce the time required to care for the birds. In many batch production plants, in which all chickens are the same size, average time required to care for the flock after the chicks have been in the brooders for the first few days, is as little as two to three hours per day. The owner is free to devote most of his time to other activities. When the batch of birds has been sold, the operator has a busy time for a few days cleaning and sterilizing the plant in preparation for the next batch.

They all require fuel, and in nearly all cases it is propane. Oil heat has practically passed out, and electricity is not popular.

The heating of the brooder houses generally follows one of two systems. The majority use the direct-fired overhead hover, having a capacity of about 450 chicks. This system offers the advantages of lower investment.

The other method, costing con-

Suburban Gas Service's "brooder farm special." Don Hamilton, driver.

siderably more to install, involves the use of a central boiler, from which hot water is circulated through pipes embedded in a cement slab which extends the length of the brooder house. Hovers are suspended above the warmed slab to confine the heat. With this method, fuel costs are reported to be lower.

Fuel cost per chick varies with the method of brooding and the seasonal temperature. Some heat is required at night for brooding chicks even in the warmest months. The under-hover temperature is not allowed to drop below 70° for the first three weeks. After that, the minimum is gradually lowered. By the end of five weeks it is dropped to 60°, and shortly thereafter it is shut off completely. The average fuel cost per chick may be as low as ½c during the midsummer months, and in some cases it goes up to nearly 6c in midwinter. On the valley's production of 10,000,000 meat chickens, this adds up to a tremendous volume, estimated at more than $250,000 for the valley.

The majority of this gas in the concentrated area around Lancaster and Palmdale is supplied by three companies, Suburban Gas Service, Inc., Imperial Gas Co., and Lancaster Gas Co. The remainder comes from other dealers delivering in the Frazer Mountain and Adelanto areas.

Suburban considers the brooder farm business as a specialty line. They train selected drivers in all phases of the business, and these men take full responsibility for the handling of these accounts. Bulk storage tanks at the brooders hold a minimum of 500 gals. of fuel. They are filled weekly during the heavy heating season, and as frequently as is required during the warmer months. Most of this company's brooder accounts are provided with leased tanks and metered service, the fuel being invoiced as it is consumed.

Special Services Given

Special service to growers includes testing and adjusting of brooder burners prior to the starting of a new batch of chicks and, of course, emergency deliveries anv time of day or night, if required.

Two employes, Don Hamilton and Wilber Ball, take care of the brooder end of Suburban's business, making all deliveries, servicing the burners, and making friends of the growers.

The large dumps and good concentration of plants hold the delivery costs to a reasonable minimum, and make the business highly desirable in spite of the fact that its seasonal volume coincides with the house heating peak. It is volume business with special advantages.

Cooking For Profit

Prove What Gas Can Do and You Make the Sale

Commercial

AS the gas dealer in your area, you must perform a complete service, including the sales, installation and service of domestic, commercial and industrial appliances. If you don't, your competitor, "Reddy Kilowatt," will make damaging inroads on business that you should have.

Let's talk about the sale of commercial cooking ranges. Commercial gas range sales are lost to competitors by butane-propane gas companies each year because of insufficient know-how and/or not enough sales push. Lost sales are hard to recover, so let's get those sales this year. This means selling prospects who don't have commercial gas ranges now and especially replacing antiquated ranges now operating where Reddy Kilowatt may get his foot in the door.

"Profit" is the Buy Word

It is well to bear in mind, when selling commercial ranges, that your prospect is likely to respond to the "profit" motive since he is in the business of cooking for profit. Some exceptions may be churches, schools and lodges, but even in these kitchens, cost and economy of operation are top factors in selecting new ranges. Slant your selling talk profitwise.

By TRACY B. MADOLE
Manager, Commercial Sales Department
Magic Chef, Inc., St. Louis

Consider the selling features in today's modern gas ranges. Each of these features has a direct bearing on the profit operation of your commercial prospect. Let's take a range apart and talk about some important profit features.

Design

The modern commercial gas range is an all-steel, perfectly designed unit which is symmetrical, streamlined, sturdy and long lived. The exterior is smooth and free from bolt heads, screw heads, crevices, sharp corners or projections where cooking greases might accumulate. Thus the range is not only pleasing in appearance, but a

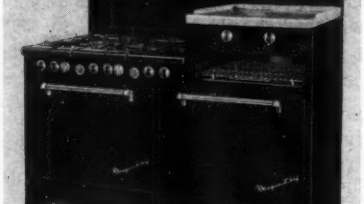
time-saver to clean. Time is money. Time is profit. Time is important.

Top Burners

The grate top burner is of round design to distribute heat evenly and efficiently over the bottoms of large or small utensils. The small round-head burner is well protected by even small utensils so that drippings, spill-overs or spatterings never affect it. Heat adjustment is instantaneous at any of a thousand settings. When turned off, there's no lag of dissipating heat—all the heat stops immediately. It never loses efficiency no matter how many years you use it. It never burns out. It's a fuel saver, it's a time saver and it doesn't require costly replacement.

Compare these features with the electric range element which produces an unsatisfactory low, medium or high heat setting with few or no intermediate adjustments. If you're using a large utensil, the element heats only a spot the size of the element. If the utensil is small, the area of the element outside the utensil is completely wasted. Also, if the utensil doesn't completely cover the element, boil-overs, and drippings are sure to run into the element, causing smoke and dirt, reducing its efficiency and shortening the life of the element.

When Reddy's element is turned off, it does not immediately stop heating. The heat in the element and in the radiant material around the element thus dissipates into the room. There is no satisfactory flexibility in Reddy's top element cooking. In addition, the efficiency of an electric element becomes less and less with use, just as the efficiency of a light bulb deteriorates, and sooner or later, just as in the case of the light bulb, it must be replaced. It is expensive.



Modern commercial gas range.

Sanitary Burner Bowls

Note the one-piece sanitary, easy to clean, burner bowls that fit closely around each of the round gas burners. These burner bowls are designed to contain up to a pint of liquid so that boil-overs in the busy kitchen are caught and held for quick, easy cleaning. There are no sharp corners, no difficult cleaning problems. Just wash in a pan sink in a minimum of time.

Automatic Top Burner Lighting

Each top burner lights instantly by means of an automatic lighter. No fuss, no bother, just turn on the burner and it lights. This fea-

Typical of many small commercial kitchen installations is this stainless steel battery at the Magic Chef, Inc., kitchen in St. Louis.

ture is a time saver. It's a gas saver, too, because burners will be turned off when not in use.

Top Burner Valves

Top burner adjustment valves of the finger touch control type with "clix-on" simmer setting for each burner. This feature is a real convenience. Perfect control on the top burner saves time and worry for the cooks.

Oven

The modern gas range has a roomy oven which is admirably adaptable to both roasting and baking. All oven linings are porcelain enamel coated for easy cleaning and to prevent rust and deterioration of the metal. The oven bottom is quickly removable for easy cleaning. It's a real time-saving convenience to be able to take the oven bottom out for cleaning. Reddy's oven bottom, for instance, is not removable because of the heating element necessary in the bottom.

The gas oven temperature is controlled by a constant level throttling type thermostat which keeps the oven temperature on an even keel during baking or roasting. It is a proven fact that roasting done in a thermostatically controlled oven at low temperature (300°) shows on the average about 14% less shrinkage than roasts done in

inadequately controlled ovens at high temperatures (400°). This is an important profit item in selling commercial ranges. Even a small restaurant may roast 25 lbs. of meat a day. At 14% this will show a profit saving of $84 monthly.

The modern gas oven is heavily insulated on all sides and top with the best grade of rock wool for efficiency, and comfort for the kitchen employes. The present day heat controlled, insulated oven will operate on a fraction of the fuel required in the old non-insulated type, which means extra comfort and extra profits for the operator.

Automatic Oven Lighting

The extra time saving convenience of automatic oven lighting is optional. Just turn on the valve and "presto" it lights. All automatic oven lighters are provided with 100% safety shutoff.

The Fry Top

The fry top on today's gas range is designed for real heavy duty work. Even in small restaurants the frying load is frequently heavy. This top plate has sufficient actual weight of material to store up and hold enough heat for fast continuous frying, even when the load is heaviest. A portion of the top can be heated at minimum cost during hours when customers are few. The balance of the griddle area can be quickly heated to take care of the peak load periods. Plenty of capacity is available and no waste of fuel is necessary. Frying is fast, clean and economical on the gas fired fry top range.

Range top section.

Radiant Broiler

Conveniently located beneath the griddle is a radiant broiler similar in principle to the large radiant broilers used in famous hotels and restaurants everywhere, but proportionately smaller to accommodate the space and economy requirements of the small kitchen. Radiant elements absorb heat from the gas flame and radiate it to the broiler grid in the form of red rays which penetrate deeply, thus producing the magic broiling effect well below the surface of the meat.

The natural smoke from the broiling is consumed in the gas flame.

The broiler linings are porcelain enamel coated for easy cleaning. A porcelain enamel drip tray is provided on the under side of the grid to protect the floor from dripping fats and juices when the grid is drawn forward.

Broiling is fast and clean with a modern radiant type gas broiler. Broiled foods are healthful and

The article which ran in the January issue of BUTANE-PROPANE *News* by Mr. Madole presented arguments and information the dealer could use in soliciting commercial cooking accounts.

This month the author shows why the mechanical features of gas ranges are superior to those of electric ranges—more good selling arguments.

Learn these points of superiority for gas and make more commercial sales!—Editor.

tasty, a great help toward building large volume restaurant patronage.

Electric Competition

If electric competition is troublesome, consider these important facts:

The first cost of a comparable electric commercial range is substantially higher than for a gas range. Compare capacity and price. Remember, your prospect is cooking for profit.

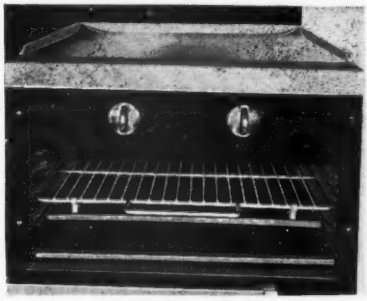
The operating cost of a comparable electric range is substantially higher than for a gas range. Remember the demand charge for electricity. These two cost items are of immediate concern to your prospect and are most likely to influence his decision on equipment purchase.

Dependability Means Profit

Butane-propane gas service is dependable. By comparison, wind, sleet, snow, falling tree limbs, faulty switches, burned out fuses and burned out elements frequently interrupt electric cooking service. Such interruptions are no respector of time. In fact, due to the very nature of the equipment, interruptions are more apt to happen during the heavy periods of meal preparation than at other times. Think of the exasperating and costly inconvenience of an electric range going dead at such a moment.

Speed Means Profit

In commercial cooking speed is vital. Americans everywhere are busy people whether they are at work or at play. In either case, where they order food, they want it fresh, fast and done just right. The gas range is designed to give it to them, top quality, top speed. The top burner, for instance, provides maximum heat instantly for hurry-up service. No need to wait for elements to heat up. Just turn on the burner and start cooking. Increased speed means increased customer turnover, which in turn means greater net profit.



Griddle-broiler section.

Flexibility Means Profit

The gas burners, providing an infinite number of settings, produce just the right amount of heat for any given operation. By comparison, the limited position electric switch is inadequate and requires time consuming attention. How would you like to own an automobile that would travel only at 15 miles per hour, 30 miles per hour, 45 miles per hour, or stop. You wouldn't like it, would you? That's what you'd have in the electric range top element, which you can readily see is inadequate.

Trend in Competitive Fuel Ranges

Compare, now, today's specialized commercial gas range with the commercial electric ranges that are being offered.

For instance, a double oven gas range such as shown here, may be provided with hot top sections for vegetable cooking, grate top burners for short order, fry top for hamburgers, radiant broiler for steaks and chops, and insulated, thermostatic controlled oven for roasting and baking. Each of these sections of the gas range is designed for its own specialized job.

By contrast, electric ranges are being advertised and promoted with "all purpose" tops. On this amazing revert you fry eggs where you heat water, where you cook vegetables, where you fry bacon, etc., etc., etc. We say "revert" be-

Many large kitchens, such as famous Grand hotel at Mackinac Island, Mich., use L. P. gas to cook.

cause commercial gas range manufacturers discarded that principle as unsatisfactory many years ago. This is a day of specialized work. No all-purpose range can possibly do a satisfactory job in a busy kitchen.

It is obvious that no written word is sufficient to cover all competitive appeals, which may be based either on fact or fiction. However, even in those isolated areas where competitive fuel is materially cheaper than gas, the majority of commercial kitchens are gas range equipped because gas, and gas ranges, will do the job of commercial cooking fastest, best and at the most profit.

Need Help?

As we said at the beginning, the surest way to lose the commercial range business is not to go after it. But if you start out and find you need some help, call or write your favorite manufacturer's representative. He'll be happy to give you a hand, and the more prospects you have the better. It won't be long until you won't need his help.

U. of Minnesota Will Have 4th Annual Service School

Special emphasis on bulk equipment for use in farm and suburban installations will be featured at the University of Minnesota LPG short course at University Farm in St. Paul, March 24-26.

Other phases of the L. P. gas industry which will be covered by university and industry men include safety, domestic equipment controls, tools and instruments for the serviceman, utilization equipment, tractors, and customer relations.

At the special bulk equipment session discussions will be on controls for heavy-duty heating equipment, utilization equipment for bulk use of LPG, and combustion problems and their correction.

A $12 fee will be charged for each student. This will entitle each student to a copy of the lectures and proceedings. A limited number of rooms will be available in dormitories at University Farm at the rate of $2 per night per person.

Cooperators in the school conducted by the department of agriculture of the university are the Liquefied Petroleum Gas Assn., the National Butane-Propane Assn., and the Minnesota Petroleum Gas Assn.

Italians Will Hold Petroleum Convention

The seventh national convention of the Italian petroleum industry will be held in Taormina on April 21-24.

The program will include sessions devoted to geology, geophysics, transportation, storage, distribution, refining, and utilization, both thermal and chemical.

Those interested in attending should contact the Giunta Executiva, Via Nomentana 92, Taormina, Sicily.

Light Hydrocarbons Production Going Up Again in '52

PRODUCTION at natural-gasoline and cycling plants in 1951 continued the steep upward trend that has existed since the end of the war. Total production at all plants averaged 561,200 bbl. daily, an increase of 63,800 bbl. daily, or 12.8% over the very high average that was set in 1950.

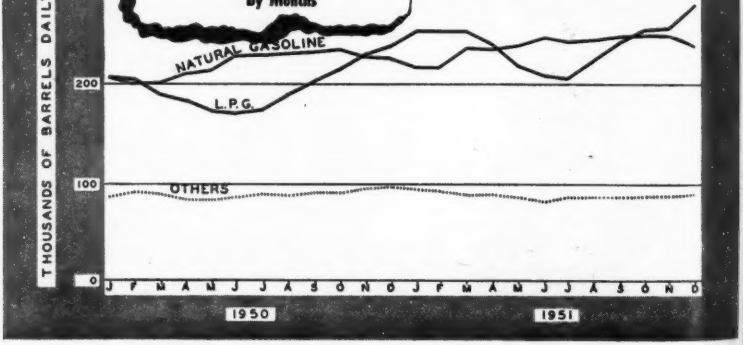
These facts, and those that follow, are set out in an article by John C. Casper in the Jan. 28 issue of the "Oil and Gas Journal."

The 1951 average was about twice the record which was set in the high-demand war year 1944, and was 2.5 times production in 1941, the first year for which complete data on plant production were collected by the Bureau of Mines. Reports for prior years did not include LPG.

Production for 1952 is expected to average about 598,000 bbl. daily or 6.6% greater than for the past year.

Growth in the production of light hydrocarbons has been influenced by two major factors—demand for light products and the spreading public demand for the conservation of natural gas. For the year 1952, there are two other factors, either or both of which may limit production for the year. These are the probable shortage of material for plant and pipe line construction, and increased operating and construction costs at a time when product realization is limited by price ceilings.

Potential demand for light hydrocarbons in 1952, particularly for LPG will be up more than the 6.6% increase estimated for total production.



PRODUCT OUTPUT AT NATURAL-GASOLINE AND CYCLING PLANTS
(Thousands of barrels daily)

	Natural gasoline	LPG	Other products	Total	Per cent increase	Per cent LPG
1941	144.1	46.1	31.3	221.5		20.8
1942	135.1	50.5	42.7	228.3	3.0	22.1
1943	138.0	59.4	42.9	240.3	5.3	24.7
1944	142.4	76.1	54.8	273.3	13.7	27.9
1945	163.0	92.2	51.7	306.9	12.3	30.0
1946	175.5	91.9	49.7	317.1	3.3	29.0
1947	179.0	123.4	59.7	362.1	14.2	34.1
1948	193.8	143.7	63.4	400.9	10.7	35.8
1949	196.3	158.5	75.6	430.4	7.4	36.8
1950	216.0	197.0	84.4	497.4	15.6	39.6
*1951	235.6	240.4	85.2	561.2	12.8	42.8
†1952	246.0	266.0	86.0	598.0	6.6	44.5

*Ten months actual, 2 months estimated. †Forecast.

Since consumption of LPG is still highly seasonal, actual shortages in the winter months result in shifts to other fuels. Some potential customers have hesitated about changing to LPG because of possible shortages in periods of extremely cold weather.

Texas accounted for 53.2% of total plant production in 1951, indicating a larger relative gain than for the country as a whole since the Texas portion in 1950 was only 51.5% of the total. Natural-gasoline and cycling plants in Texas produced 35% more than plants in all other states in 1941.

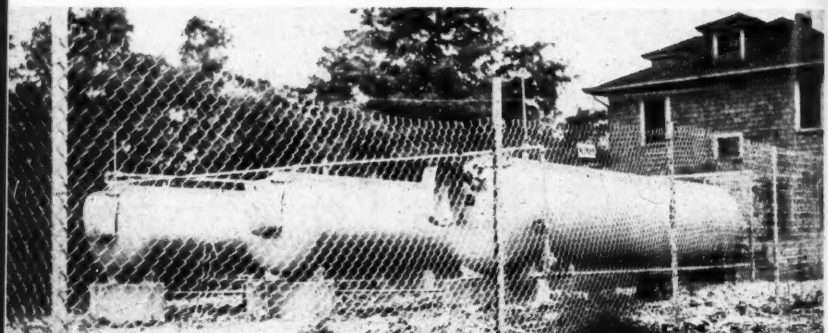
California continued in second place as a producer, followed by Louisiana and Oklahoma. These four states reported 86.7% of all light-hydrocarbon production in 1951.

Production at cycling plants represented 21.7% of total plant output in 1951 compared with 24.6% of the total in 1950 and 27.2% in each of the 3 years 1947, 1948, and 1949.

A survey of plant construction in 1951 and projects scheduled for 1952 indicates that a large part of the program has been slanted toward increased production of LPG. New plants and additional units at existing plants will make higher recovery of propane.

It is this program for higher LPG recovery that may be blocked by current price ceilings on propane and propane-butane mixtures. Since the cost per gallon increases with the percentage of propane extracted, operators may not be able to push propane extraction to the point needed to supply the demand unless ceilings are permitted to rise with increases in construction and operating costs.

Another record was established in 1951. It was the first year in which total production of LPG for the year exceeded production of natural gasoline. LPG output averaged 240,400 bbl. daily compared with 235,600 bbl. daily for natural gasoline.



Propane storage tanks supplying 1000 gals. of propane per day to drying oven equipped with Red-Ray burners.

Industrial

Industrial Loads The Dealer Can Sell

LIQUEFIED petroleum gas men are obviously in business to sell gas. The remarkable growth of the industry indicates that is composed, on the whole, of men who are go-getters. Active salesmen are increasing the customers for cooking, hot water, refrigeration and space heating—the familiar tanks are in evidence beside houses throughout the country. Many are developing new uses—some utilizing the fuel as a source of heat, others using it to power buses and tractors.

In spite of all the activity, much potential business is being overlooked by men who are working hard to sell a lot of small users. Why not also go after customers who buy large quantities, buy regularly throughout the year and who can pay promptly? The field of industrial drying offers a large number of such customers. The manufacture of most products involves

By G. R. VAN KAMPEN
Sales Manager, Red-Ray Manufacturing Co., Inc., New York, N .Y.

drying, but I refer particularly to paper and textiles.

Paper in its primary form usually contains two or more pounds of water for each pound of dried paper, and all or most of this water must be removed. With paper machines producing several tons of paper per hour it is apparent that tremendous quantities of heat are required. Paper mills are heavy users of steam in many of the processes, and much of the steam used for drying is actually a by-product. However, there is a limit to the steam available, and frequently the boilers are operating at capacity; adding boiler capacity is extremely expensive and the necessary equipment is often difficult to obtain.

LPG For Increased Production

In addition, dryers are necessary to utilize the heat from steam in the drying process. These are usually heavy cylinders. The drying cylinders with frames and drive mechanisms are costly, bulky, and not always available. Here the L. P. gas man can offer a means of increasing production without the use of cumbersome equipment. Additional steam capacity will not be required, valuable space will not be occupied, slow deliveries will be avoided, and the investment will be vastly less.

This is not idle theorizing. Figure 1 shows radiant gas burners installed on a paper machine. Numerous similar installations are increasing output by 10% to 15%. When you consider that paper machines produce 50-100 tons of paper

RISING large on the horizon of the LPG industry is the tremendous fuel load possible to develop in the industrial field.

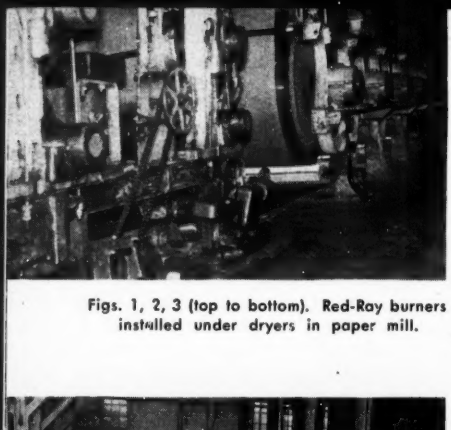
It has been ignored by most dealers but nibbled at by others. Yet innumerable plants are located in small town areas and crying for a fuel better than oil or coal and cheaper than electricity.

One reason for this indifference by dealers is their limited knowledge of most industrial applications and hence their hesitancy in approaching such plants. If only they could realize it, factories of many descriptions would be receptive to information which would better their operating processes and reduce their costs, which LPG can do in almost every instance.

One stumbling block which has often retarded industrial installations is lack of adequate fuel volume. Huge quantities are often used. In areas where cylinders are prevailingly used and bulk installations cannot be made, it is necessary to turn to other fuels than L. P. gas.

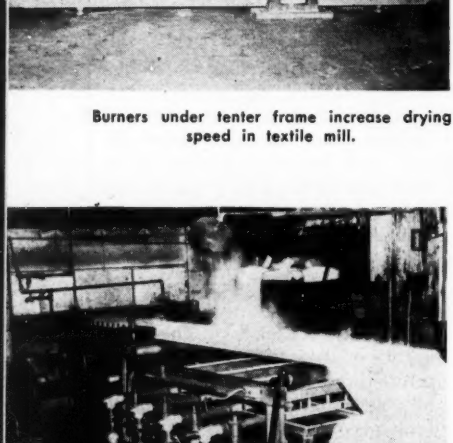
Here lies the opportunity for dealers to survey the prospects for industrial loads in their respective areas with view to establishing their own bulk plants of a size sufficient to supply the bulk needs of large users.

Then really go after the volume business. The accompanying article reveals the magnitude of such operations.—Editor.



Figs. 1, 2, 3 (top to bottom). Red-Ray burners installed under dryers in paper mill.

Burners under tenter frame increase drying speed in textile mill.



Pre-heating and pre-drying material ahead of enclosure. Drying capacity increased 35%.

per day, and often well over 100 tons, it is apparent that a production increase of even a few percent results in greatly increased profits. Many of the fixed costs are not affected materially and the extra tonnage yields more than normal profit.

From the standpoint of the supplier of gas, jobs of this type mean real business. A typical installation, such as the one in Figure 1 would consist of six 70-in. burners. Those shown are made by Red-Ray Manufacturing Co., Inc., New York City. These would have a total rated fuel consumption of 39 gals. of propane per hour. Paper mills operate 24 hours per day; therefore, the daily fuel requirements would amount to 936 gals. of propane. And this is not a seasonal business!

In addition to drying paper in the process of manufacture, there are in paper plants many other operations which involve drying. For example, coating is of extreme importance in some mills. Drying of the coated paper is customarily done by passing the paper over steam cylinders or by means of heated air, sometimes both methods. Obviously, drying the coatings by heated air is a rather slow and cumbersome process and presents serious problems. If the coated paper is carried directly to hot drying cylinders, the coating has a tendency to stick on the surfaces of the cylinders. This affects the quality of the product and necessitates frequent cleaning of cylinders. If heated air is used, the paper can only be carried a certain distance before passing over rolls

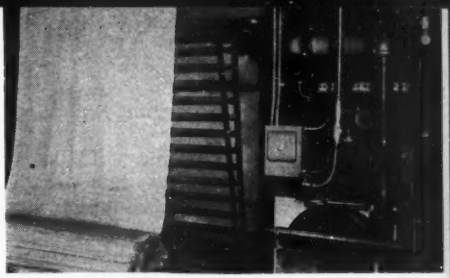
of some type, again creating the problem of sticking.

It has been found that if the paper is exposed to the direct heat from radiant gas burners immediately after coating, the coating can be set to such an extent that sticking is eliminated.

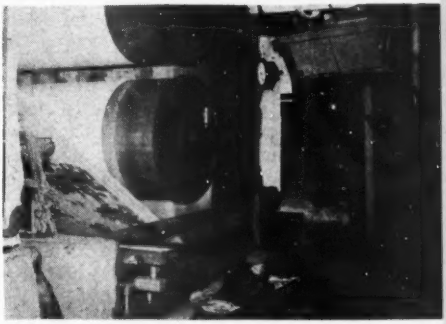
Coating jobs offer an ideal opportunity for the sale of gas. These applications of radiant gas burners are beyond competition. They offer a most practical and economical means of drying or partially drying the coatings at high speed in extremely limited space. Fuel cost is not an important factor. How else can they get the same results? Electricity as a source of heat involves greatly increased maintenance and the energy cost is usually from two to five times as great as with gas. Steam, as we have pointed out, has many disadvantages.

In printing, problems similar to those in coating are often encountered. When machines are operated at high speeds, the ink will frequently offset on the work as it is stacked, or accumulate on rolls, resulting in unsatisfactory products. Again the rapid heat transfer afforded by radiant burners will solve the problem.

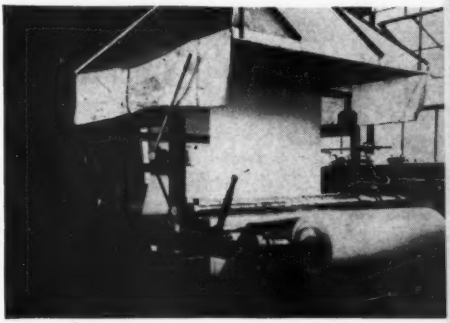
The many textile mills offer another profitable field for the L.P. gas man. Cloth, after it is made, passes through many processes before it is ready for the market. It must be bleached, dyed, sized, or singed and some must be set by heat beyond the temperatures available with steam in the average textile mill. Often a piece of cloth will pass through several of the processes mentioned above. Many of these



Figs. 4, 5, 6 (top to bottom). Textile oven for drying and curing. Burners installed within oven automatically controlled.



Burners installed under steam dryers increase drying speed and reduce sticking.



Singeing machine equipped with burners for high-speed singeing.

processes involve drying and all require heat.

Figure 2 shows one of the most common uses for gas in a textile finishing plant. Radiant burners are installed under an open tenter frame, drying cloth at high speed. While the cloth still contains a considerable portion of the initial moisture, intense heat can be applied without raising the actual temperature of the goods to a dangerous point. The rapid evaporation utilizes the heat and the cloth itself is not affected.

Steam Coils Prove Slow

Steam coils were formerly used on many of these jobs but the slow drying speeds made their use unprofitable. Ordinary drilled pipe burners have been used but their heat output is not great and the limited production is not profitable.

Radiant gas burners can deliver to the wet cloth more heat in less time and space than other heat sources. As a result, radiant burners have been widely accepted for textile drying on tenter frames. In many textile mills the tenter frames are enclosed and heated air is blown against the cloth. Steam has been widely used to heat this air but temperatures are limited by the low steam pressures in textile mills. Gas burners can provide higher air temperatures and increased drying.

Radiant burners are often installed just ahead of the enclosures as shown in Figure 3. They instantly heat the wet goods to a temperature at which rapid evaporation starts. Otherwise, a considerable portion of the travel through enclosure would be required to merely heat the cloth to evaporating temperature. These simple installations often increase the drying speed by 30% to 50%.

Drying and curing ovens present a similar problem. Steam at available pressures does not provide adequate temperature for fast drying. When special finishes containing various resins are used, it is necessary to have temperatures of 350° F, or more. This is beyond the range of steam heat in most textile mills. Gas burners located within the ovens can provide any desired temperature, automatically controlled. (Figure 4.)

Cloth is often dried on steam cans in much the same manner as paper is dried on steam dryers. Burners are located under or at sides of the cans, which are usually arranged in vertical stacks. Figure 5 shows an installation of this type. When the cloth has been sized or coated, a burner or two applied to the cloth just ahead of contact with first can will eliminate sticking on the first two or three cans.

Gas Best For Singeing

Many fabrics must be singed to remove fuzz and lint and to give the desired finish. A singeing machine is primarily a means of carrying the cloth past the burners at a uniform speed. The brief exposure to the intense heat burns off the fuzz and lint without damaging the body of the fabric. Vaporized gasoline or oil is occasionally used. Gas has been widely accepted as the most suitable fuel. The use of gas

eliminates troublesome vaporizing equipment and back flash arrestors. Maintenance is far less and fuel cost is usually as low or lower. (Figure 6.)

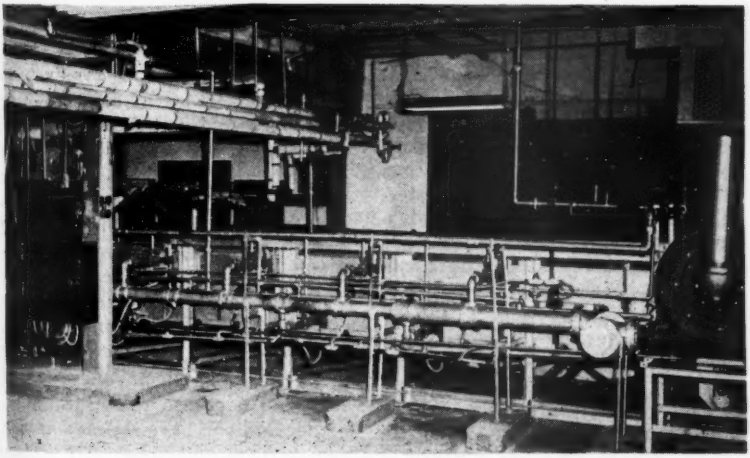
Warp slashing is an important process in some cotton mills. This involves coating the individual warps with sizing material and then drying them. The number of warps, commonly called ends, may be as great as three or four thousand. The drying is usually done on a large steam drum. Radiant gas burners may be installed under the material between the size tank and the steam dryer. Two burners will, under average conditions, increase production by 20% to 40%.

I have not attempted to go into a detailed description of textile and paper drying with radiant gas burners but have simply indicated some of the potential uses in these industries.

Do not get the impression that radiant gas burners offer advantages only in drying paper and textiles. The characteristics which make them particularly suitable for these products are of equal value in many other drying processes. (Figure 7.)

Qualities of Radiant Burners

Radiant burners combine a high heat output with an extremely rapid heat transfer. Heat is generated right at the point of use and is transferred directly to the work, without boilers, lengthy steam lines, and coils or air heaters. Each burner is independent and may be controlled individually. Fuel is used when and as required, giving maximum flexibility and economy.



Conveyor oven processing building material. Burners installed above and below wire belt handling material. (Fig. 7.)

PRACTICAL MANAGEMENT OF AN LP-GAS BUSINESS

CHAPTER 12

The Price of Gas

Basic Factors Which Determine Costs

BECAUSE people do not know the costs which enter into the price which they pay for liquefied petroleum gas, there seems to be a general feeling that gas dealers and distributors are waxing fat on lush profits. The industry, itself, is largely responsible for this feeling because of the hush-hush atmosphere with which it has surrounded itself. Even within itself there has been distrust between dealers and distributors for this very same reason.

There are gas men who will be opposed to what I am going to write because, in their opinion, I will reveal some trade "secrets." As to the "secret" nature of what I have to tell, I fail to understand why any of it is not or cannot be common knowledge.

Tank car prices of all petroleum products are published daily in the trade papers. Just let it be known that you are thinking of building a bulk plant and you will be besieged by refinery representatives who will quote prices and volunteer much other valuable information. Freight rates are public property to be imparted to anyone for the asking. Add these two figures together and you have the cost of any

By C. C. TURNER

of the liquefied petroleum gases landed in your locality.

If any gas distributor thinks that the majority of his dealers do not know what his landed cost of gas is, he's mistaken. Information comes to them from other sources than his own little tight organization. His very secretiveness has been the cause of much curiosity, for it is human nature to explore that which is not known.

It is the spread between this landed cost and what the dealer has to pay for gas that causes him to feel that the distributor is taking an unfair advantage of him, and the same spread, plus that between what the dealer has to pay and what the customer has to pay, causes the customer to grumble and say "there ought to be an investigation."

Service Below Cost

Perhaps it might be a good thing, for it would bring out the fact that many customers are getting service below cost, and that the industry gambles heavily upon the future and upon building up the individual gas load to the point where it will be profitable. It certainly would prove that the industry would be justified in discontinuing service for economic reasons to some small users, who, because of the higher price per unit of measurement that they pay, are apt to be the most vociferous.

I pick up my trade paper and it tells me that propane in tank cars is selling for a certain number of cents per gallon f.o.b. Northeastern shipping points. I know that a tank car holds approximately 10,000 gallons and that the freight from the nearest shipping point is a certain number of dollars. Divide the freight by 10,000 and you have the freight in cents per gallon. Add this to the f.o.b. shipping point price of propane and you have the cost of it per gallon, landed in any community. Divide the gallon price by 4.23 and you have the landed price of propane per pound. You come up with some mighty small cost figures per gallon or pound. Wow! This fellow Turner is certainly making money! He charges too much for his gas!

Equipment Investment Large

But wait a minute, that is on the siding. It is a long road from that siding to the customer, and many authorities and individuals are going to insist upon "cuts" every step along the way. You can't handle the liquefied gases in paper bags or unload them onto common loading platforms. This business requires an immense investment in specialized equipment with which to handle its product. That equipment is taxed, it must be insured, it depreciates, it must be handled by competent men, the progress of the product to the consumer must be supervised at each step by men with the "know-how," and because some careless fellow may smell gas and light a match to see if it really is gas, I've got to pay exhorbitant insurance premiums for protection all along the way.

Precious little of what the consumer pays will find its way into

Harassing red tape.

my pockets; the distributing end of this business operates upon fractions of a cent per pound, and I sometimes wonder when I consider all of the red-tape through which I must wade whether or not this distributing business is such a good one to be in after all.

Take the plant. In the first place I can't govern the speed with which the railroad handles shipments. There are times when it surprises me, and because I haven't room to put the gas in my tanks I have demurrage charges to pay. At other times I may be entirely out of product and be forced to buy or borrow from my competitors. Every once in a while the railroad presents me with a sizeable bill for "maintenance" of the side-track which I am supposed to own. I have leaks and handling losses with which to contend and an occasional argument with the shipper over the contents of a car. Even if my plant were smaller than it is, I'd have a payroll to meet, and the unions tell me what I am to pay and what a man may or may not do. Because I am in interstate business, the government sticks its oar in. The tax assessors visit me once a year, and because I am in a business which is associated with the oil industry they do not hesitate to "tuck the tariff" to me.

Other tax assessors out in the hundreds of little towns which I serve see my cylinders and gas equipments on the sides of buildings and they send me more tax bills. The Internal Revenue Department is forever interested in my mathematics, time and the elements depreciate the physical properties which I own. Something is always breaking down and requiring replacement or repairs. Someone is always making a claim for an absurd "adjustment" which I nevertheless allow as a matter of "policy."

The insurance people seem to like to scare me to death about things which never happen but

Troubles that undermine profits.

"Beyond a Shadow of a Doubt"

with REGO REGULATORS

The "heart" of every LP-Gas system is the low pressure regulator. It must give your customers the dependability that you want them to have—and that they have every right to expect.

In their role of the most important piece of equipment on any LP-Gas system, RegO regulators are designed to give outstanding dependability at all times, even under extreme operating conditions.

RegO low pressure regulators are specified as standard equipment by major tank manufacturers and LP-Gas distributors the country over. They know that RegO regulators keep costly repair and replacement charges at a minimum and too, they help to maintain customer satisfaction at the high level that brings about increased gas loads.

More RegO low pressure LP-Gas regulators are in operation than all other makes combined. This is proof positive that they give the utmost in dependability—*beyond a shadow of a doubt!*

RegO is the registered trade mark of the Bastian-Blessing Co.

REGO
LP GAS EQUIPMENT
Stocked by These Distributors
GAS EQUIPMENT CO. *Dallas, Texas*
GAS EQUIPMENT SUPPLY CO. *Atlanta, Ga.*
GAS EQUIPMENT CO. of DENVER—*Denver, Colo.*
A. C. FINK, S. A., *Mexico, D. F.*
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MEMBER
national LP-GAS PROMOTIONAL program

The BASTIAN-BLESSING Company
4201 W. Peterson Ave., Chicago 30, Illinois.

PIONEER AND LEADER IN THE DESIGN AND MANUFACTURE OF PRECISION EQUIPMENT FOR USING AND CONTROLLING LP-GASES

which nevertheless, if they did, could put me out of business. They sometimes require me to make seemingly unnecessary expenditures and send around inspectors who use common flashlights when inspecting my pump house, then tell me that a fire extinguisher should be three quarters of an inch higher above floor level.

To top it off, some new-comer to the business thinks he can cut corners by eliminating some of the precautions which I take and starts selling gas at prices below that at which I can afford to sell it. Yes siree, it's a great business and it is a blessing that we distributors don't know what we are in for when we get into it!

Let us see what we are getting into with a bulk plant costing $35,000 (exclusive of land) located in a town where the tax rate is $70 per thousand and having a through-put of 500,000 gallons (2,115,000 pounds) per year.

Depreciation	$3,500.00
Taxes	2,450.00
Interest on investment at 5%	1,750.00
Operating labor	4,840.00
Insurance	1,000.00
Product losses (estimated)	525.50
Telephone, $25 per month	300.00
Electric power, $15 per mo.	180.00
Heating (estimated)	100.00
Office supplies & postage	200.00
Adjustments with customers ½ of 1%	262.75
Repairs and replacements	600.00
Sidetrack maintenance	50.00
Miscellaneous other expenses	200.00
Total	$15,958.25

There isn't anything in the above amount for supervision, profit, or cost of product, yet it amounts to 3.19c per gallon, or 0.75c per pound!

If you are going to operate with cylinders in this same community with a $70 tax rate, depreciate your cylinders on a 17-year basis, and depreciate your regulating equipment on a 7-year basis, you have several other expenses that probably never occurred to you.

First let us consider cylinders at a cost of approximately $17 each.

Depreciation per year 1/17th of $17	$1.00
Interest on investment 5%	0.85
Painting & maintenance costs	0.30
Taxes	1.19
Total	$3.34

Now let us take a look at gas equipment. You've got to buy in large quantities to buy 2-cylinder manual gas equipment with protective housing for $12.94 delivered, and automatic equipment with protective housing at $16.90 delivered. Probably by the time this is published the costs will be much higher, but you can follow through with the same method of figuring as is here used.

	Manual 2 Cylinder Equipment	Automatic 2 Cylinder Equipment
Depreciation. 1/7th of cost	$1.85	$2.40
Taxes	0.91	1.18
Interest on investment, 5%	0.65	0.85
Cost per year	$3.41	$4.43

On the 2-cylinder hook-up the time that a cylinder is tied up is twice the length of time between cylinder orders, as is demonstrated

South Bend

for over 50 years always the BEST !

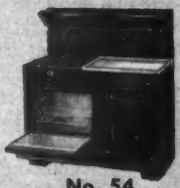
No. 3025

That is when your customers will thank you for selling them the big, roomy eight-burner cooking top of South Bend Range No. 3025. More space for utensils — greater cooking capacity — FASTER SERVICE! Like all South Bend Ranges, No. 3025 is extra rugged too — with super strong all cast top, heavier griddles, ovens and door construction — Quality Built thru and thru with everything needed to give the many extra years of trouble-free service for which South Bend Ranges are famous.

Only South Bend offers this super value — costs but a few dollars more — repays the small difference tenfold in a few busy months. A duplicate model is available in the big South Bend Heavy Duty Series (Our No. 2025) with 26" x 28" oven — 80" of super rugged range length.

It's Noon and They're Hungry!

No. 50



No. 54

LUNCHEONETTE RANGES
Nos. 50, 54 and 56. Perfect for the small restaurant, drive-in, tavern, soda bar.

All gas Refrigerator

Malleable Steel Range Mfg. Corp, South Bend 21, Indiana
Send us Catalog
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MALLEABLE STEEL RANGE MFG. CORP., South Bend, Indiana, U.S.A.

Table 20. Elapsed Time on Cylinders Loaned to a Customer, Customer Using Four Cylinders Per Year.

Date of Cylinder Installation	Designation of Cylinders Installed	Designation of Cylinders Removed	Elapsed Time
Jan. 1	A and B	none	none
April 1	C	A	3 months
July 1	D	B	6 months
Sept. 1	E	C	6 months
Jan. 1	F	D	6 months
April 1	G	E	6 months
July 1	H	F	6 months
Sept. 1	I	G	6 months
Jan. 1	none	H	6 months
April 1*	none	I	6 months

*Equipment removed.

by Table 20, compiled on the basis of four cylinders per year.

This means that you have got to figure double the actual yearly cost of one cylinder on each 2-cylinder job. Now let us see in Table 21 what your overhead expense is for customers using from 1 to 200 cylinders per year.

What is the value of such a table? Plenty! While it only applies to the hypothetical $35,000 plant in a community with a tax rate of $70 per thousand and with a through-put of 2,115,000 pounds per year, it should call to the attention of the dealer or the distributor that there is a definite expense involved in distributing packaged gas and that it has a definite relationship to the quantity of gas that the customer purchases in a year.

He is short-sighted who disregards the items of interest on invested capital, taxes and depreciation. Suppose the capital invested is your own. If you were not in the gas business it would be invested in something else, or perhaps loaned out at interest.

As for taxes, if you have so far escaped them, don't think that you are going to continue to do so. The electric boys are seeing to that, calling to the attention of a tax-hungry government that gas equipment should be taxed just the same as wires and poles.

Coming to depreciation, 15 years ago we thought that we had to have large regulators, but they are a curiosity now. Ten years ago we thought we had the ultimate in 100-pound capacity cylinders that weighed about 96 pounds each. Today we have the newer, lighter weight, special alloy cylinders. If you are setting your gas prices without including these items you are on the way to insolvency and the poorhouse. Many gas distrib-

Wherever You Are

A. O. Smith Liquid Gas Systems are warehoused near you, giving you, as an A. O. Smith dealer, many valuable advantages:

- **Better freight service.**
- **Lower transportation rates.**
- **Direct-to-yard truck deliveries.**
- **Special benefits which A. O. Smith dealers enjoy exclusively!**

With a superior product—made by A. O. Smith Corporation—this convenient warehousing service assures customer satisfaction . . . more profitable business for you. If you are not yet an A. O. Smith Dealer, mail the coupon.

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Liquid Gas Systems

are maintained at Cincinnati; Denver; Evansville; Houston; Jeffersonville, Indiana; Kansas City; Knoxville, Tennessee; Los Angeles; Omaha; Panama City, Florida; Peoria; Pittsburgh; Roswell, N. M.; St. Paul; Seattle and Union, New Jersey.

Fast rail shipments at low F.I.T. rates, west of the Mississippi, from Houston.

A. O. Smith Liquid Gas System with Exclusive Vapor Dome*—all controls and fittings in one convenient spot.

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Boston 16 • Chicago 4 • Denver 2 Houston 2 • Los Angeles 22 • Midland 3, Texas • New York 17 • Philadelphia 3 • Pittsburgh 19 • San Francisco 4 Seattle 1 • Tulsa 3 • Washington 6, D.C.
International Division: Milwaukee 1

Table 21. Cost per cylinder delivered to a customer exclusive of plant supervising expense, profits, landed cost of product and transportation from plant to customer. Package delivery service—100 lb. capacity cylinders.

Cyls. Per Year	Plant Through-Put Expense	Expense 2 Cyls.	Expense Manual Equip-ment	Total Expense, Manual Equipment	Expense Automatic Equipment	Total Expense, Automatic Equipment
1	$0.75	$6.68	$3.41	$10.84	$4.43	$11.86
2	0.75	3.34	1.71	5.80	2.22	6.31
3	0.75	2.23	1.14	4.12	1.48	4.46
4	0.75	1.67	0.85	3.27	1.11	3.53
5	0.75	1.34	0.68	2.77	0.89	2.98
6	0.75	1.11	0.57	2.43	0.74	2.60
7	0.75	0.95	0.49	2.19	0.63	2.33
8	0.75	0.84	0.43	2.02	0.55	2.14
9	0.75	0.74	0.38	1.87	0.49	1.98
10	0.75	0.67	0.34	1.76	0.44	1.86
11	0.75	0.61	0.31	1.67	0.40	1.76
12	0.75	0.56	0.28	1.59	0.37	1.68
13	0.75	0.51	0.26	1.53	0.34	1.61
14	0.75	0.48	0.24	1.47	0.32	1.55
15	0.75	0.45	0.23	1.43	0.30	1.50
16	0.75	0.42	0.21	1.38	0.28	1.45
17	0.75	0.39	0.20	1.34	0.26	1.40
18	0.75	0.37	0.19	1.30	0.25	1.37
19	0.75	0.35	0.18	1.28	0.23	1.33
20	0.75	0.33	0.17	1.25	0.22	1.30
21	0.75	0.32	0.16	1.23	0.21	1.28
22	0.75	0.30	0.16	1.21	0.20	1.25
23	0.75	0.29	0.15	1.19	0.19	1.23
24	0.75	0.28	0.14	1.17	0.18	1.21
25	0.75	0.27	0.14	1.16	0.18	1.20
26	0.75	0.26	0.13	1.14	0.17	1.18
27	0.75	0.25	0.13	1.13	0.16	1.16
28	0.75	0.24	0.12	1.11	0.16	1.15
29	0.75	0.23	0.12	1.10	0.15	1.13
30	0.75	0.22	0.11	1.08	0.15	1.12

Continued on Page 88

Great names...every one

● Tappan is proud to have been the first manufacturer to develop and market appliances for the LP field. We are proud to have made contributions that helped the great names in the field increase the use of LP as a fuel.

For over twenty-five years Tappan has stood shoulder to shoulder with these and others in the LP industry . . . promoting the use of LP in our own national advertising and supplying active, sales-producing programs for dealers.

Tappan will continue its development research in LP appliances. We will continue to give you every advertising and sales aid possible. We want to help you get your share of the rapidly expanding LP market.

THE TAPPAN STOVE COMPANY • Mansfield, Ohio

For 71 years the makers of fine ranges

Your guide to the best in modern automatic cookery

Table 21—Continued

Cyls. Per Year	Plant Through-Put Expense	Expense 2 Cyls.	Expense Manual Equip-ment	Total Expense, Manual Equipment	Expense Automatic Equipment	Total Expense, Automatic Equipment
40	0.75	0.17	0.09	1.01	0.11	1.03
50	0.75	0.13	0.07	0.95	0.09	0.97
60	0.75	0.11	0.06	0.92	0.07	0.93
70	0.75	0.10	0.06	0.91	0.06	0.91
80	0.75	0.08	0.04	0.87	0.06	0.89
.....	.....	.....	.....	.....	.....	.....
90	0.75	0.07	0.04	0.86	0.05	0.87
100	0.75	0.07	0.03	0.85	0.04	0.86
110	0.75	0.07	0.03	0.85	0.04	0.86
120	0.75	0.06	0.03	0.84	0.04	0.84
130	0.75	0.05	0.03	0.83	0.03	0.83
.....	.....	.....	.....	.....	.....	.....
140	0.75	0.05	0.02	0.82	0.03	0.83
150	0.75	0.04	0.02	0.81	0.03	0.82
160	0.75	0.04	0.02	0.81	0.03	0.82
170	0.75	0.04	0.02	0.81	0.03	0.82
180	0.75	0.04	0.02	0.81	0.02	0.81
190	0.75	0.04	0.02	0.81	0.02	0.81
200	0.75	0.04	0.02	0.81	0.02	0.81
.....	.....	.....	.....	.....	.....	.....

utors who have disregarded these items and have thought to undersell their wiser competitors thereby, are in precarious circumstances at the present time.

Table 21 also has a greater use with your customers. It does not reveal the cost of your product landed in any particular town or the profits that you make upon it. The table can be shown to those customers who are always pestering you for a lower gas price, particularly the small users. Does Mrs. Pinchpenny, complaining over a price of 15c per pound for propane in the single cylinder that she buys each year, realize that it is costing you over $10 per year just to furnish her with equipment and have her on your books? *That has to be charged against that single cylinder.*

Some bulk operators escape from the charges of interest, taxes, and depreciation of the equipment located at the customer's premises by selling containers and regulating equipment to the customer, but someone has to pay for them, and don't think that Reddy Kilowatt doesn't call this to their attention. The bulk operator is at a disadvantage in small deliveries with

Ransome

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P-52 Utility Furnace is practically impossible to upset accidentally; has heavy, pressed-steel base and solid steel standards to withstand rough handling; please specify maximum size pot to be used (6, 8, 9, or 10").

1. PLENTY OF PROSPECTS AND USES. **Originally designed for plumbers, the handy, light-weight (9 lbs.) RANSOME Utility Furnace is used now by—**

plumbers	mechanics	for melting lead, asphalt,
ranchers	sheetmetal workers	babbitt, paraffine,
contractors	roofers	sewer compounds,
manufacturers	electricians	wax, glue;
cabinet makers	home workmen	for heating water and
machinists		various solutions

Many of these prospects will buy in quantity—all at a nice profit to you.

2. PREMIUM BUSINESS. **RANSOME Utility Furnaces use LP-Gas in small containers, so you get a premium price of 33⅓ to 50% above bulk.**

3. CREATE NEW OUTLETS. **RANSOME users soon see how safe and inexpensive LP-Gas is and are first-rate prospects for other industrial and home uses.**

Write TODAY for price list, dealer discounts, and big, 20-page catalog describing RANSOME'S full line of utility furnaces and torches.

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long hauls, but can get his costs down on large deliveries, due principally to his ability to handle a large volume in a shorter period of time.

There is a tremendous temptation to bulk plant men to build their plants in places where they will be conspicuous and to make such places monuments to their names, but such plants might better be classed as monuments to folly. Such locations are usually expensive and located where taxes are high and building restrictions such as to greatly increase the plant cost without contributing to its efficiency. Using our hypothetical plant with a through-put of 500,000 gallons per year located in a community where the tax rate is $70 per thousand, Table 22 has been computed to show the effect of plant investment on through-put cost.

A difference of 1.1c per gallon, or 26c per 100-pound cylinder between a plant costing $35,000 and one costing $10,000, is a far better advertising investment than the glory of a prominently located and expensive plant. Better to put the money into plant equipment that will cut down operating costs than to put on a show to satisfy your ego and keep up with the Joneses.

Table 22. Effect of Keeping Plant Investment Small in a Plant Located Where the Tax Rate is $70 Per Thousand and Through-put 500,000 Gallons Per Year. Cost of Product, Management Expense and Profits Excluded.

Plant Cost	$35,000	$30,000	$25,000	$20,000	$15,000	$10,000
Interest on Investment 5%	$ 1,750	$ 1,500	$ 1,250	$ 1,000	$ 750	$ 500
Depreciation 10% per year	3,500	3,000	2,500	2,000	1,500	1,000
Taxes, $70 per thousand	2,450	2,100	1,750	1,400	1,050	500
Total these three items	7,700	6,600	5,500	4,400	3,300	2,200
Other plant operating costs	8258.25	8258.25	8258.25	8258.25	8258.25	8258.25
Total operating cost*	15958.25	14858.25	13758.25	12658.25	11558.25	10458.25
Cost per gallon*	3.19c	2.97c	2.75c	2.53c	2.31c	2.09c
Cost per pound*	0.754c	0.702c	0.650c	0.598c	0.546c	0.494c

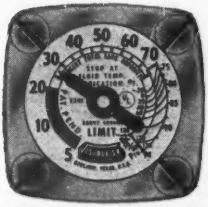
*F.O.B. plant, exclusive of cost of product, management expense and profits. These, plus delivery expense and cost of equipment necessary for delivery and product use to be added.

THERE IS A VISIBLE MAGNETIC FLOAT GAUGE

for Every LP-G Need including MOTOR FUEL TANKS & TRANSPORTS

JUNIOR*

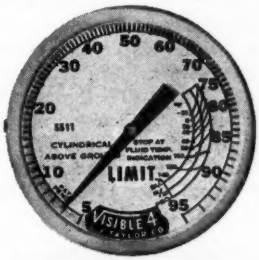
1½-inch dial face



SENIOR*

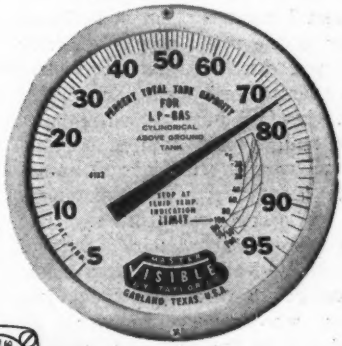
2-inch dial face

* For above or below ground domestic systems and MOTOR FUEL TANKS. Top, side, end or angle mount.



VISIBLE "4"

4-inch dial face. For large domestic, small storage and TRANSPORTS.



MASTER

10-inch dial face. For LP-Gas and Anhydrous Ammonia storage tanks.

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INCORPORATED

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1213 S. Akard Street
Dallas, Texas

Stiff competition with lower prices may come your way, and an expensive plant, once it is built, is something upon which you cannot economize or cut operational costs.

". . . reports to work all tired out."

Other operating costs should be kept as low as possible, but in one respect I must caution you. Cheap labor is the most expensive labor that you can hire. Get good men, pay them a fair wage, and insist that they produce accordingly. A good man, poorly paid so that he has to work after hours at something else is a poor investment, and while some operators say that it is none of their business what a man does with his time after hours I have got to differ with them. The fellow who reports to work all tired out in the morning, or who is beset by personal worries or who comes onto the job with a "hangover" isn't any good to himself or anyone else.

Clear minds, enthusiasm for the job and a sound body are essential at every step along the way in this business. As a side thought, I suggest that every plant man have periodic physical examinations, paying particular attention to such things as ruptures, heart, eyes, weight, size and muscular development. There is a lot of lifting to be done around a bulk plant at times, sometimes minor emergencies develop which require quick thinking and action, and you can't afford to trust your investment to anyone who is apt to do anything but the right thing at such a time, or who is apt to fail physically.

Herein are the fundamental factors which enter into the cost of the liquefied petroleum gases to you and to the customer. The frosting upon the cake can often be more expensive than the cake itself, and such other items as advertising, sales expense, and trying

Troubles of a distributor.

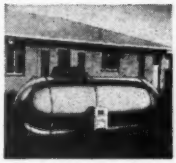
to obtain customers in an area that never could be profitable to you are some which can exceed the factors which we have so far considered and which may throw you for a loss. I shall take these matters up in later chapters.

BUEHLER engineering brings you the finest...

LP-GAS PLANTS displaying the BUEHLER label not only meet all code requirements but in addition carry a dozen or more specially engineered features for safety and convenience.

For example, all fittings are positioned on the tank in a manner most convenient for easy and safe filling. Then too, all fittings including the regulator are enclosed under an extra heavy guard box with hasp for locking. With fittings on top of the tank you're protected against freeze-ups in winter time. All welds are smooth and clean; no burrs, sharp edges or wrinkles to cut your hands.

With 33 years experience in tank engineering plus our policy of building "QUALITY YOU CAN SEE," Buehler brings you the finest in LP-GAS plants—at no extra cost.



BUEHLER

QUALITY YOU CAN SEE

BUEHLER TANK & WELDING WORKS

5900 Pacific Boulevard • Los Angeles 58, California

ASSOCIATIONS

Central States District

Close to 450 industry men are expected to attend the LPGA's Central States District meeting in Wichita, Kan., on March 31-April 1. Meeting place is the Broadview hotel.

Highlights of the program will include a "Gas vs. Electricity" demonstration presented by Harper-Wyman Co.; a discussion of the industry's Washington problems by Howard D. White, LPGA; a sound-slide film in color titled "Facts About L. P. Gas Storage" presented by M. A. Ennis, National Committee for LP Gas Promotion; and a sales talk entitled "Welding the Weakest Link" by Ralph Carney, Wichita.

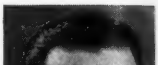
According to R. C. Tanner, district secretary, a trade exhibit with 30 booths will be held in connection with the convention. A Smorgasbord buffet will be served Monday evening, March 31, and a banquet and floor show will close the convention the following night.

LPGA

Progress is being made in the program arrangements for the May 12-14 annual convention and trade show of the Liquefied Petroleum Gas Assn. to be held at the Palmer House in Chicago. An estimated 2500 attendance is expected to set a new record.

The marketers section, chairmanned by W. A. Schuette, Hausgas, Inc., Washington, Mo., has already scheduled several speakers, including S. J. McLagen, general sales manager of Suburban Propane Gas Corp., Whippany, N. J., who will describe the successful water heater selling program devised by his company. I. W. Patterson, vice president and sales manager of the General Gas Corp., Baton Rouge, La., will also be featured on the marketers program.

S. J. McLAGEN



I. W. PATTERSON

The outside-the-industry speaker at the convention will be Arthur Motley, well-known sales executive and president of "Parade," a Sunday magazine newspaper supplement. At present Mr. Motley is chairman of the National Distribution Council of the Department of Commerce and is chairman of the board of the National Federation of Sales Executives.

The original 165 booths offered for display purposes are being augmented by additional space due to increased demand.

H. C. TenBrook, chairman of the

arrangements committee, reports that the "Gas-Flame Gaieties for 1952" will be an outstanding feature on the lighter side of convention business. Mrs. TenBrook is in charge of the women's program and has scheduled a variety of activities for lady delegates.

Michigan

Clarence Habermehl, Fuel Gas Co., Flint, Mich., was elected president of the Michigan L. P. Gas Assn. at the group's winter meeting in Grand Rapids, Jan. 28-29. He succeeds Bradley Price, Lansing, who held the office during the past year.

Other officers for 1952 include J. O. Reavis, Bing Gas, Kalamazoo, vice president, and J. O. Gower, Michigan Bottled Gas, Eureka, secty.-treas.

Mike Goodman reported on the exemption of use tax on cylinders. Highway fuel tax was discussed by Mr. Habermehl. Mr. Price spoke on legislation.

Directors for 1952 are Bradley Price (chairman), B. L. Peck, C. A. Wright, Mike Goodman, and V. W. Packard.

Michigan dealers will hold their summer convention at Houghton Lake. Nola Thomas is chairman of the committee in charge of arrangements.

New York

That L. P. gas dealers of the state of New York are interested in organizing themselves into a state group was evidenced by the fact that on Jan. 24 more than 100 operators met in Albany to lay the foundation for a state-wide association.

The meeting was called by Leonard

Clarence Habermehl (left), newly elected president of the Michigan L. P. Gas Assn., chats with LPGA's North Central District secretary, John Kelderhouse (center), and retiring president Bradley Price.

GARLAND

Launches 1952 National Advertising Campaign with FULL PAGE COLOR ADS IN 18 MAGAZINES

Industry's hardest-hitting campaign! Concentrated on prospects who are ready to buy now for:

- Restaurants
- Hospitals
- Schools
- Institutions
- Hotels
- Drug Stores
- Variety Stores
- Department Stores
- L-P Gas Installations
- Marine Field

The 1952 Garland campaign is selected and directed to reach not only the *largest potential market*—but also the *major buying influences* within each market! Garland advertising delivers you more "ready-to-buy" customers because Garland pin-points prospects with an exclusive story of value, prestige and dependability that is unequalled!

Yes, again in 1952 as in previous years, Garland leads the field with more down-to-earth selling support for its dealers, and for the gas industry. First in advertising, as in acceptance, performance and profit possibilities.

Sell Garland, the line that pre-sells more "ready-to-buy" customers! Sell the Line of the Leader!

GARLAND

DM PRODUCTS

Heavy Duty Ranges • Restaurant Ranges • Broiler Roasters • Deep Fat Fryers • Broiler-Griddles • Roasting Ovens • Griddles • Counter Griddles • Dinette Ranges

DETROIT-MICHIGAN STOVE CO., DETROIT 31, MICHIGAN

Ferris who headed an organizational committee and arranged for the open meeting. Later Mr. Ferris, head of Household Service, Inc., Clinton, N. Y., was elected president of the group.

Marcy Coyle, Atlantic States Gas Co., Cortland, was named first vice president, and Jack Neumann, Trageser Copper Works, Maspeth, Long Island, was elected secretary-treasurer.

One of the first official acts of the new association was to affiliate itself with the national Liquefied Petroleum Gas Assn. in that organization's state integration program. Action was taken after presentation of the integration plan by R. H. Mahnke of the LPGA's Chicago office.

Among those who talked at the meeting, in addition to Mr. Ferris and Mr. Mahnke, were Roy R. Johnson, Fuelane Corp.; Lou Davis, LPGA's New England secretary; John Knox Smith, LPGA's field engineer; and G. M. Rohde, Hardwick Stove Co., whose subject was "Meeting the Challenge." This was an illustrated talk upon competition by the electric industry.

The New York association by-laws divide the state of New York into 12 districts, each of which is represented on the board of directors by one individual and there are three additional directors-at-large. The board of directors consist of the following: John Scozzafava, Louis C. Cohen, Leonard W. Ferris, Ralph Liporace, Harry V. Smith, Marcy Coyle, Gordon Bierbrauer, Charles F. Scott, R. O. Baehren, Albert F. Breitung, Louis E. Seley. Directors-at-large: G. M. Rohde, Jr., Jack Neumann, Roy R. Johnson.

NGAA

A change in the format of the annual convention (April 30-May 2) of the Natural Gasoline Assn. of America has been made, according to William F. Lowe, secretary of the group. The convention will be held at the Rice hotel in Houston.

WM. F. LOWE

As a result of the change, morning sessions of the convention will consist of forums on specific subjects, each held in a separate room and running simultaneously. Afternoon sessions, however, will be general in nature with topics of broad general interest presented.

NGAA president, John F. Lynch, LaGloria Corp., stated that there were various reasons why the usual general sessions had become impractical. "Operations within the industry are now so varied and personnel so divided into groups of specialists that sessions must also be divided to appeal to special groups," he said.

According to Frank Matheny, Sid Richardson Gasoline Co., program committee chairman, separate forums are planned on the following subjects: Gathering Systems—High and Low Pressure, Safety and Personnel, Traffic, Fractional Analysis, Corrosion, Absorbtion Oils and Efficiency, Short Cuts in Design Calculations, and Liquefied Petroleum Gases.

Ohio

The annual spring meeting of the Ohio L. P. Gas Assn. will be held April 29-30 at the Fort Hayes Hotel in Columbus, according to President Lyman Adams. Dealer-members are asked to bring new members and ideas for creating new uses for LPG and

improving service to their customers.

Details of the program are being worked out by the program committee.

•

Other Ohio industry activities include participation in the state fair, Aug. 22-29, and district service schools. The program at the Feb. 7 school in Canton was under the direction of George Postlewait, Bastian-Blessing Co., and J. A. Cerny, Bryant Heater Division.

Proper installation of ranges and water heaters was featured, including regulation of gas, sizing of line, adjustment and calibration of oven, etc.

W. S. LANDER

W. F. ROCKWELL SR.

Southeastern District

Outstanding industry leaders will be on the speakers' program at the March 24-26 convention of the LPGA's Southeastern district scheduled for the George Washington Hotel in Jacksonville, Fla.

In line with the defense situation, J. W. Oyler, assistant to director, Petroleum Administration for Defense, and Howard D. White, LPGA's executive vice president now stationed in Washington, will follow their addresses with a question-and-answer period on controls, regulations, etc.

Other speakers will include LPGA President W. S. Lander; Earle A. Clifford, recently appointed head of the Gas Fuel Technology course; Mel Ennis, employe training director, National Committee for LP-Gas Promotion; and Mark Anton, president of Suburban Propane Gas Corp.

In addition, W. F. Rockwell, Sr., board chairman of Rockwell Manufacturing Co., Sen. Karl E. Mundt, and Elmer Wheeler will address the attendants.

According to T. G. Fields, district secretary, hotel reservations are at a premium and it is suggested that those not yet registered contact Mr. Fields at the district office, 800 Peachtree St., N. E., Atlanta 5, Ga.

The entertainment and friendship committees, headed by Albert W. Spiller and Luke Ernest, respectively, are completing their arrangements.

The Jacksonville Convention Bureau and a committee of local women are in charge of setting up a program for women attendants.

Texas

Hundreds of retail butane-propane dealers will gather in Dallas on June 18-20 for the seventh annual convention of the Texas Butane Dealers Assn. and the second annual Southwestern Butane Exposition.

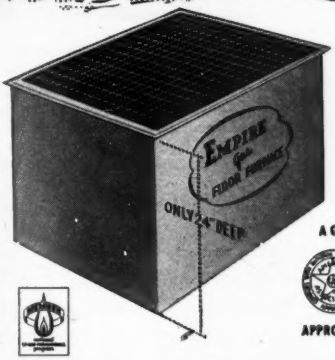
BILL LAWSON

The Baker hotel will be the site of the business sessions while the ballroom of the first floor of the Adolphus hotel will house the exposition. Space for over 50 exhibit booths is available.

According to Bill Lawson, execu-

Tie up

WITH A LINE
THAT MEANS BUSINESS



AGA APPROVED

EMPIRE

Gas

FLOOR FURNACES

Mean....

- Increased Sales
- Greater Profits
- Satisfied Customers

The *Empire* Line offers...

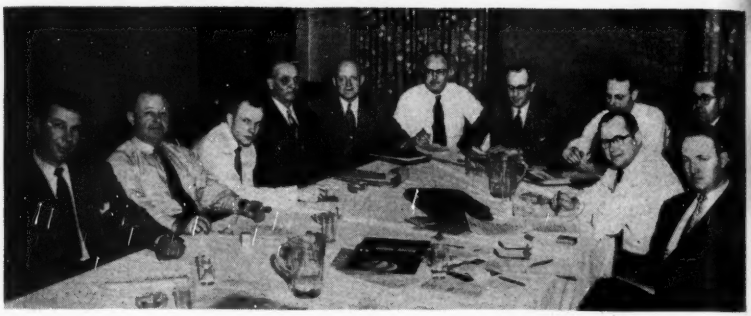
Low initial cost
Economy of operation
Minimum service calls
Controlled comfort
Ease of operation
Dependability of fuel
Safety of operation
Long life of appliance

EXCLUSIVE WITH EMPIRE

The FAMED *"Thriftmatic"* *Gas* BURNER

All Models are Available for Use with Either Natural, Mixed, Manufactured, or L-P Gases

EMPIRE STOVE COMPANY
BELLEVILLE, ILLINOIS
WORLD'S LARGEST MANUFACTURER OF *Gas* FLOOR FURNACES



Members of the LPGA District 5 education committee plan the LPG managers' school scheduled for April 14-18 at the University of Kansas, Lawrence. Reading clockwise around the table are: Glen O. McGuire, Union LP Gas System; L. M. Mitchell, Standard Gas & Equipment Co.; D. V. Briedenthal, U. of Kansas; D. K. Scruby, Omaha Blaugas Co.; Burt J. Fahs, Remington-Rand; John Knox Smith, LPGA; Homer Devault, district chairman, Darlingas Co.; E. A. MacFarland, U. of Kansas; Fred A. Rives, chairman, LPGA national education committee, Automatic Gas Co.; W. A. Schuette, Hausgas Co.; and R. C. Tanner, district secretary, LPGA.

tive secretary of the TBDA, over 500 dealers from the states of Texas, Oklahoma, Colorado, New Mexico, and Louisiana will be in attendance.

Southern "Tech" Will Graduate Class of 59 in March

Fifty-nine seniors will be graduated from Southern Technical Institute, Chamblee, Ga., on March 19. The men will be available then for openings with L. P. gas companies, according to R. L. Wilkinson, placement director.

Qualification records will be furnished and interviews arranged. Because of demands in recent years, more of the students have specialized in gas fuel technology. Other technology study classifications in which the students have specialized include: building construction, electronics and radio, electrical, civil, heating and air conditioning, industrial and mechanical engineering.

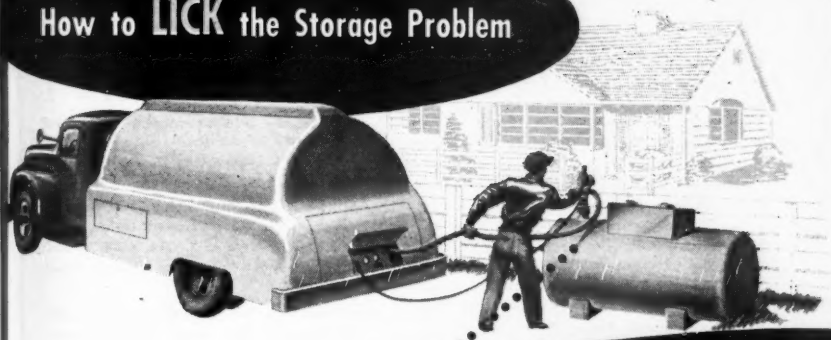
Texans Plan 3rd Annual Management School

The third annual "Management Institute," sponsored by the Texas Butane Dealers Assn., in conjunction with the state department of education and the University of Texas, will get under way in Austin April 7 and continue for four days.

The institute was inaugurated early in 1950 after it was determined that, although there were a great many schools for servicemen and employes in the L. P. gas industry, there was a lack of instruction for management in such subjects as cost accounting, merchandising, store remodeling, employe and public relations, and many others.

TBDA met with the present cosponsors of the school and plans were made for the first highly successful session which prompted the continuation of the course.

How to LICK the Storage Problem



Install ROCKWELL LP-Gas METERS

Use your customers' tanks for storage

When you install Rockwell meters on every service, you automatically double or triple your storage facilities. With a metered system you can fill customer's tanks at will—use his facilities to enlarge your own limited bulk storage capacity. Thus you can buy LP-gas in larger quantities and at seasonably advantageous prices. You can serve an expanding market without additions to your central plant. And you can save on year 'round delivery costs.

Such savings soon offset your nominal initial investment in Rockwell meters. Quickly thereafter watch your profits rise. Hundreds of alert distributors now "rely on Rockwell" for money saving, money earning metered service. Write for prices and full details.

You Can RELY ON ROCKWELL

For Everything in Measurement and Control

THE LITTLE METER YOU NEED

The Rockwell No. 00 is small—can be tucked away in tight places. It has ample capacity for today's and tomorrow's loads. Mounting brackets are available for installation ease.

ROCKWELL MANUFACTURING CO.

PITTSBURGH 8, PA.

Atlanta Boston Chicago Houston Kansas City Los Angeles
New York Pittsburgh San Francisco Seattle Tulsa

CALENDAR

March 17-19—Mountain States District Service School. University of Denver, Denver.

March 20-21—LPGA Eastern Canadian District Annual Convention. Windsor Hotel, Montreal, Quebec.

March 24-25—Utah L. P. Gas Assn. Meeting. Newhouse Hotel. Salt Lake City.

Mar. 24-26—LPGA Southeastern District Convention. George Washington Hotel. Jacksonville, Fla.

March 24-26—University of Minnesota LP-Gas Service School. St. Paul.

March 31-April 1—LPGA Central States District. Broadview Hotel. Wichita, Kan.

April 1—Wisconsin L. P. Gas Assn. Annual Convention. Whiting Hotel. Stevens Point.

April 3-5—Florida L. P. Gas Assn. & Florida-Georgia Gas Assn. Combined Convention. Sorento Hotel. St. Petersburg, Fla.

April 7-8—Montana L. P. Gas Assn. Great Falls.

April 7-9—Missouri L. P. Gas Assn. Annual Convention & Trade Exhibit. Hotel President, Kansas City.

April 9-11 — Midwest LP-Gas Service School. Iowa State College, Ames.

April 13-15—Mississippi LP-Gas Assn. Annual Convention. Edgewater Gulf Hotel. Edgewater Park.

April 14-18—LP Gas Managers' School. University of Kansas. Lawrence.

April 18-19—Liquid Gas Dealers Assn. of California. Annual convention. Fresno.

April 23-25—South Dakota L. P. Gas Assn. Convention. Marvin Hughitt Hotel. Huron.

April 29-30—Ohio L. P. Gas Assn. Annual Spring Meeting. Fort Hayes Hotel. Columbus.

April 30-May 2—Natural Gasoline Assn. of America. Rice Hotel. Houston, Texas.

May 12-15 — American Petroleum Institute, Division of Refining. Mid-Year Meeting. St. Francis Hotel. San Francisco.

May 12-14—LPGA Annual Convention & Trade Show. Palmer House. Chicago.

May 21-23—Gas Appliance Manufacturers Assn. Annual Meeting. The Broadmoor. Colorado Springs, Colo.

June 8-10—Arkansas Butane Dealers Assn. Annual Convention. Little Rock.

June 9-13 — Southeastern LPG Service School. Georgia Institute of Technology. Atlanta.

June 18-20—Texas Butane Dealers Assn. Baker & Adolphus Hotels. Dallas.

June 23-24—Wyoming L. P. Gas Assn. Casper.

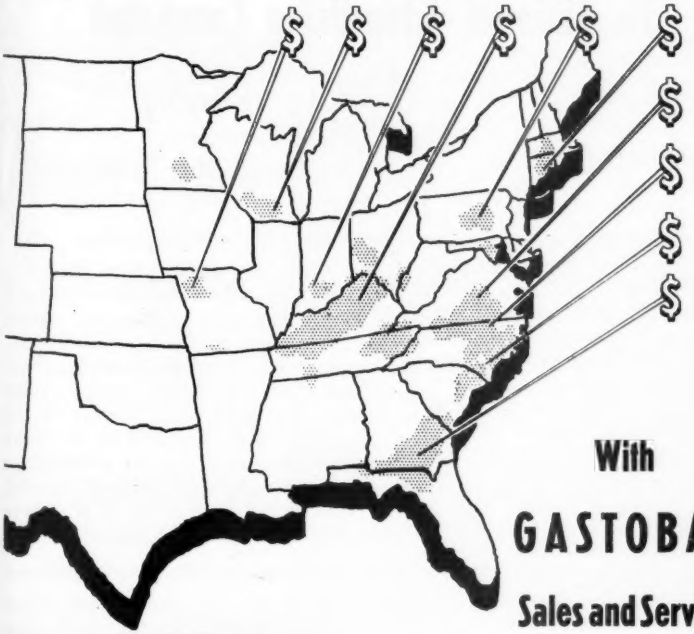
Aug. 18-19—Kentucky LP Gas Assn. Annual Convention and Trade Show. Seelbach Hotel. Louisville.

New Booklet Explains Gas Inventory Control

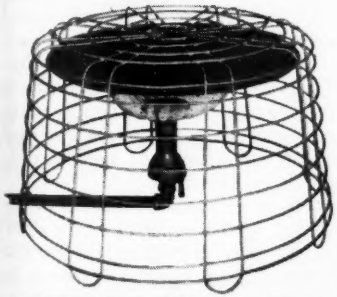
The new 10-page "Inventory Control for L. P. Gas" by J. E. Getzen of L.P.G. Equipment, Inc., Orlando, Fla., has been published for general distribution by The Bastian-Blessing Co. The booklet describes a simplified control system for the gas passing through the plant and delivery trucks and into cylinders and bulk tanks. Because of the ease with which it functions and the economies involved, the L. P. gas man will find this system a very welcome tool in his operations. The booklet is complete with illustrations and forms to facilitate its adoption.

By permission of the copyright owner, "Inventory Control for L. P. Gas" is being made available through The Bastian-Blessing Co., 4201 West Peterson Ave., Chicago. The price of the booklet has been set at 75 cents per copy to cover the cost of its reproduction.

New L P Profits Growing Here!



With GASTOBAC Sales and Service



Gas sales are building fast in tobacco-growing areas (see map) for LP Dealers who sell and service GASTOBAC, the modern, gas-fired tobacco curing system . . . now advertised to tobacco growers everywhere. Build new repeat business and *a profitable summer gas load* with GASTOBAC.

GASTOBAC CURING SYSTEMS are shipped to you complete, for quick, easy installation. *Get complete information from*

GASTOBAC COMPANY Dept. B-2
306 W. Tremont Ave., Charlotte, N. C.

GASTOBAC
CURING SYSTEMS
TRADE MARK — BRIGHT LEAF INDUSTRIES, INC.

How LPG Distributors React To National Advertising Campaign

62% Replying To a Survey Support This Program

WHAT have been the practical results of the national advertising campaign which has been in progress for the past two years to acquaint the rural and small town public with the merits of liquefied petroleum gas as a fuel?

This is a question of much importance to operators throughout the country and to the manufacturers of appliances and equipment whose products are sold into the industry. Huge sums of money have been expended for gaily colored advertisements in many national magazines such as "Saturday Evening Post," "McCall's," "Good Housekeeping," "Better Homes & Gardens," and the "American Home," as well as in national and state farm journals to tell families beyond the city gas mains the story of the superiority of butane and propane for all uses within the home.

And now the question is, has the campaign accomplished its purpose? Is it helping distributors to sell more fuel and appliances? Is it successfully offsetting the widespread electric propaganda that has sought to capture the domestic load for electric concerns?

Have the ads been seen?

Have they done a good job?

It hasn't been possible to make a house-to-house canvass to obtain the public's reaction to these questions, but BUTANE-PROPANE *News* has just completed a survey among the 4000 bulk plant owners in the country to determine how they have profited and to ask for suggestions on ways to improve and broaden the campaign in order to gain even greater consumer acceptance.

Questionnaire Brought the Answers

Some of these have been financially supporting the campaign, which is directed by the National Committee for LP-Gas Promotion, of Chicago. How they view the results is shown by their answers to a two-page questionnaire mailed to them. And, generally speaking, they say the program has been profitable. It is clicking.

But it is significant that only 62% of those replying financially support this campaign and that barely half of them are tying in their local advertising with the national theme. A number of operators stated they did not believe they could properly tie in their local

FISHER®

Offers you..

1 QUALITY
to give you better pressure control

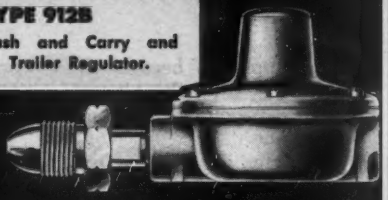
2 VARIETY
to enable you to select the correct regulator for your needs

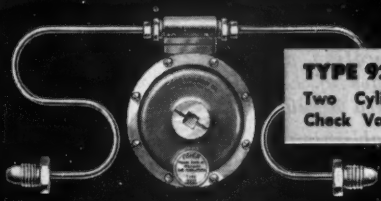
Here are **Fisher's BIG FIVE** in **LP Gas Regulators.** They are engineered, designed and manufactured to provide the **very finest** in performance, dependability and satisfaction.

FISHER GOVERNOR COMPANY
Marshalltown, Iowa

EASTERN OFFICE
212 E. State St.
Westport, Conn.

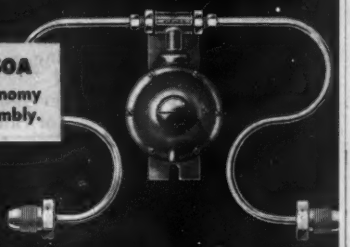
TYPE 912B
Cash and Carry and Trailer Regulator.

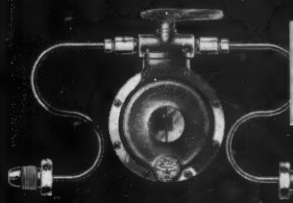




TYPE 923
Two Cylinder Integral Check Valve Assembly.

TYPE 912Y-1850A
Two Cylinder Economy Check Valve Assembly.





TYPE 924
Manimatic Two Cylinder Manual Change-Over Regulator.

TYPE 965A
Unimatic Two Cylinder Automatic Change-Over Assembly.

campaigns because they were not supporting the plan financially.

However, 78.6% of these bulk plant owners are cognizant of the campaign and, of these, a large number believe:

It is contributing substantially to combating electric competition.

Educating prospects on the advantages of LP-Gas and LP-Gas-operated appliances.

Establishing "LP-Gas" as the common name for all liquefied petroleum gases.

Generally increasing the prestige of the LP-Gas industry.

Of the total replying to the questionnaire, 94.5% sell household appliances with consumer demands calling for them in order of ranges, water heaters, space heaters, refrigerators, and clothes driers, while farm applications showed a preference, in order, for carburetion equipment, brooders, stock tank heaters, dairy equipment, dehydrators, and weed burners. Less than half (47.4%) are presently making automotive conversions.

In summing up the overall results, it can be said that the national advertising campaign is showing substantial benefits. It is causing farmers and small town residents to weigh intelligently the merits of gas against the claims of electricity.

It is providing a foundation upon which dealers can tie in their local advertising.

And it is making selling easier because housewives everywhere are better informed regarding what magic services liquefied petroleum gas can perform. The most prevalent arguments used in selling this fuel, according to the answers, are that it is economical, clean, dependable, quick, convenient, safe, suitable for all applications, gives long service, and can be easily controlled.

Probably the most important conclusions that can be drawn from the survey is that the general plan of advertising the industry's services is sound and is successfully aiding distributors to combat competitive fuels and build prestige for their product. But also it is indicated that the cost is being borne by too small a segment. This not only lessens the amount of money available for advertising, but restricts the results that could be obtained with a united backing—moral and financial—of all industry members.

Valuable clues to why this support has not been more universal can be found in a few of the comments made on returned questionnaires, and so some of these are quoted to aid those directing and contributing to the campaign to remedy the apparent deficiencies, the most glaring of which are lack of time and opportunity to sell the idea to the hundreds of operators who are still unfamiliar with its objectives.

Alabama

"Unless something more is done to touch people in the Southeastern and Southern states, the present form and medium of advertising now used does us absolutely no good. I read a lot and can truthfully say I have never seen the first line of their advertising."

•

"Haven't been asked; and am not familiar with the theme they are using."

Arkansas

"No instructions to date as to how to participate."

•

"Giving good service is the best advertising."

My customers want SERVICE so I have to know my source of SUPPLY...

SUNRAY
NATURAL POWER
LP-GAS

In this business, Dealers must be sure that the product is available, and plentiful. You can't build a business on promises — dependability of your source of supply means everything. Sunray has plants in Arkansas, California, Kansas, Louisiana, Oklahoma and Texas and offers a full line of LP-Gases.

WRITE, WIRE OR TELEPHONE
Gas-Gasoline Department

SUNRAY OIL CORPORATION

General Office • First National Bldg.

5th & BOSTON TULSA 3, OKLAHOMA

California

"It is not adaptable to our area."

•

"Don't know the theme."

Colorado

"Has not been convenient to fill in application."

Connecticut

"The advertising is not helpful in this section of the country."

•

"The use of 'LP-Gas' in national magazines means nothing to readers in the New England section—the words 'bottled gas' should be tied in."

Delaware

(Contributes but does not tie in.) "National advertising is so old-fashioned and out-moded that one reading it feels it is directed only to the man and woman down on the farm—no appeal to urban dwellers. We have been dismayed with the type of advertising put out on a national basis. The type of advertising is clumsy and the thought it seeks to convey, though desirable to the LP-Gas operator, does not strike home to the people we have in our territory."

Florida

"Do not contribute because we feel that their advertising does not reach the class of people we serve—the national theme is poorly timed to our season and subtropical needs."

•

"Feel that our own approach is better—and has proven better than national advertising."

Georgia

"We do not have any material that will tie in."

Idaho

"Have not made arrangements for this tie-in material."

•

"They haven't coordinated their program yet."

Illinois

"'LP-Gas' and other names are confusing the public. We sell it as propane."

•

"We are bulk dealers. Most advertising is directed to aid bottled gas dealers."

Iowa

"No—started up in last quarter of '51 and have not been contacted by any national organization representative as yet and do not know whom to contact."

•

"Do not tie in—doesn't fit very well."

Kansas

"We are of the opinion that the national LP-Gas advertising program has no value for a bulk dealer."

•

"It is an added expense that competitors do not have in our territory."

•

(From a producer) "LP-Gas is produced as a by-product, which can be disposed of easily."

Kentucky

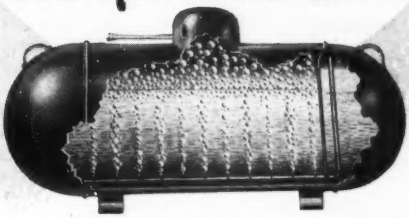
"Can't get competitors to go along; we advertise, they don't. Tie-ins would create a desire which would give a competitor an equal chance at the sale. We advertise our own name and brands."

•

"Not interested in national program — cannot make connection

Why sell this.. when you can sell this

Conventional butane-propane tank.



the amazing MIX-O-GAS system

SALES ADVANTAGES

SERVICE ADVANTAGES

You can make your "cash register" ring more often and serve your customers better when you sell the most modern, up-to-the-minute system known to the L-P Gas industry. Delta's Mix-O-Gas System embodies patented features that give extraordinary performance. Fuel savings are certified to by the Pittsburgh Testing Laboratory. A hard-hitting, proved advertising campaign helps get the story over to the public. Why sell out-moded systems on your own when you can sell Mix-O-Gas and have the help of our advertising-sales promotion program? Write for information.

DELTA TANK MANUFACTURING CO. INC.

P. O. BOX 1469, BATON ROUGE, LA. • P. O. BOX 1091, MACON, GA.
Export Office; Suite 110, International Trade Mart, New Orleans, U. S. A.
MANUFACTURERS OF LPG PRESSURE TANKS AND I. C. C. CYLINDERS

(tie in) to LP-Gas. We advertise propane or bottled gas."

Louisiana

"Haven't thought about it. Haven't seen much national advertising."

•

"Cost does not justify value received."

Massachusetts

"Using manufacturer's ad-mats on appliances, etc."

Michigan

"No. Don't know when and who are advertising with. No advance notification of what the national advertising will be and when."

Minnesota

"Do not contribute because a lot of their funds are spent in larger areas."

•

"Haven't seen any."

Mississippi

"We already belong to local and state associations."

•

"Our tie-ins are limited—distributor cooperative advertising naturally comes first."

Missouri

"Don't feel that it is justified. Money should go to solving industry's biggest problem—winter shortages."

•

"Haven't seen any of the LP-Gas ads in local paper."

Montana

"Do not tie in — don't know how."

"It costs too much for a small business, from my understanding of it. Do not belong to national advertising, so am not entitled to it."

Nebraska

"I don't think it is effective enough per dollar spent to our business."

•

"Not a member."

New England

"Have not seen any national promotion."

New Mexico

"Basis of payment is too high. We advertise products only."

•

"We use a registered trade name for our products. We want people to remember our trade name and not LP-Gas, alone."

New York

"Haven't given it much consideration."

North Dakota

"We are not members of the LPGA."

•

"National advertising is coming three years late—REA very firmly established now. Biggest problem outside of REA is price-cutting and poor installations by unscrupulous operators. National ads are too restrained — take off kid gloves and give it to 'em like Reddy Kilowatt does to us. Show some comparisons as to cost of operation; appliance upkeep cost; original appliance cost. These are our advantages — let's use them. Our dealers are not in the least impressed by present ads."

Ohio

"New company, no money as yet. Can't afford that much advertising. Re: carburetion. These farmers are way behind the times. Can't get them started on LP-Gas as yet."

•

"Can't take care of business we now have; we need more gas."

Oklahoma

"National advertising is the responsibility of national distributors."

•

"We have never been contacted as to using national advertising."

Oregon

"We withdrew our contribution due to being one of two dealers contributing in the entire state of Oregon."

•

"Do not feel that the national program fits local problem."

South Dakota

"Our campaigns are on the products we handle."

Tennessee

"We use the LP-Gas symbol only."

Texas

"It's designed primarily for Eastern and Northern operators; not for this area. Our only competition is natural gas."

•

"Ours is to sell—not educate."

Virginia

"The industry should drive harder on the fact that gas is modern—just as modern as any electric appliance or service."

Washington

"We contribute only as a matter of national good policy. We do not feel that in this area it will be more than moderately effective."

Wisconsin

"We feel the industry should, as it has been doing, increase the prestige of the industry. However, each individual company should maintain the close company-consumer relationship and not become part of a high-pressure central organization."

Wyoming

"We advertise at the local level."

•

Now the sixth round of advertising directed at domestic and commercial prospects on farms and in small town and suburban areas is under way. The LP-Gas Information Service handles the program for the National Committee for LP-Gas Promotion from its headquarters at 11 S. La Salle St., Chicago, and advertisements scheduled in magazines and papers most likely to reach the desired homes are expected to go to 35,500,000 readers. This spring's program is built around the convenience and importance of ample hot water in the home and is illustrated with clever cartoon drawings showing the whole family utilizing the product of an LP-Gas water heater whose fast recovery supplies a quantity of hot water that is ample to meet every need—and without the delays incident to those water heaters which depend upon slower-heating electricity for fuel.

PRODUCTS

Compressor

WORTHINGTON PUMP CO.
Harrison, N. J.

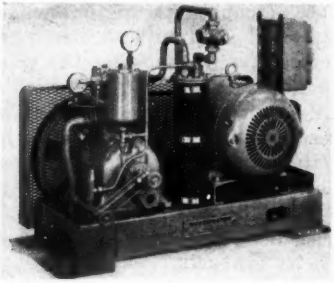
Model: LPG Transfer Unit.

Description: The unit not only transfers the gases but also the residual vapors, representing from 800 to 1200 gals. often left in the tank car after it is emptied of liquid.

The self-contained assembly of the unit comprises compressor, motor, motor starting switch, suction surge drum, oil filler pot, combined discharge drum with relief valve and oil separator with automatic return, 4-way valve, suction and discharge pressure gauges, multi-v-belt drive and belt guard—all mounted on base ready for installation.

The compressor is designed specifically for compressing gases. Cylinders and crankcase are one integral casting eliminating gasketed faces between crankcase and cylinder. A mechanical packless seal on the shaft retains gas in crankcase.

Worthington's Model "LPGA" for similar handling of anhydrous ammonia is a modification of the "LPG."



Clothes Dryer

HAMILTON MANUFACTURING CO.
Two Rivers, Wis.

Model: Hamilton

Description: New features in the dryer include a "Hi-Power" exhaust system which simplifies installation and eliminates lint and moisture problems. The exhaust guide permits diffusion of exhaust into the laundry room in any direction—upwards, to the right, or to the left, whichever is most convenient for the dryer location. The guide and the exhaust system permit satisfactory indoor venting in most cases.

Also new in the dryer is a full, 130-minute setting on the timer which permits drying of the heaviest, slowest-drying items such as shag rugs, without resetting the timer. It also makes possible completely automatic, one-cycle drying of clothes washed by any method.

Of particular appeal to the homemaker is the heat-resistant plastic ring around the loading porthole. It stays cool and won't chip or fade.

Stock Tank Heater

BROYHILL CO.
Dakota City, Neb.

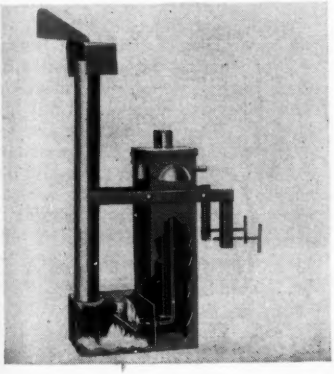
Model: Handi-Heater.

Description: This heater features a special burner designed to deliver 11,000 Btu at full flame. The heater can be easily throttled if less heat is desired.

The three main parts of the "Handi-Heater" include the stack, a two-piece unit with the larger stack fitting down over the outside of the other to create two-layer insulation; the main heater box, of heavy gauge steel, has built-in baffle, correctly placed intakes, and a cover that cannot be knocked off.

Built for wood, cement, and steel tanks, the heater has an AGA-approved automatic shutoff. Adjustable brackets make installation simple.

The burner and control unit distribute heat to both top and bottom of heat chamber. A built-in damper is featured.



Circulator Heater

STIGLITZ FURNACE & FOUNDRY CO.
2007 Portland Ave., Louisville, Ky.

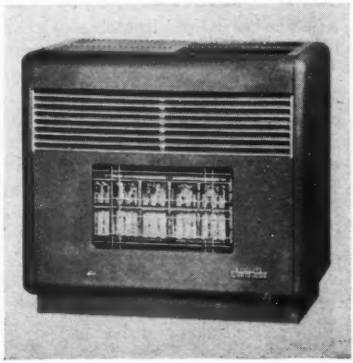
Model: Superliner Warm-Aire.

Description: A new 1952 line of AGA-approved circulator-type heaters is available in 30,000, 40,000, 55,000, and 70,000-Btu input sizes.

Features include a triple heat exchanger which extracts more heat from each cubic foot of gas by means of additional radiation chambers; "Blue Streak" burner with multiple raised ports for best performance; and either radiant-front or enclosed models with louvered fronts.

A fully automatic temperature control, the Robertshaw "Unitrol," is offered as an accessory. On all L. P. gas models, where the Unitrol is not specified, a Baso safety pilot is used.

Stiglitz heaters have turbine-type blowers which deliver positive flow of air over radiation surfaces and into the room.



Water Heater

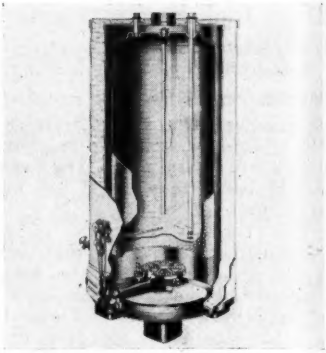
McGRAW ELECTRIC CO.,
CLARK DIVISION.
5201 W. 65th St., Chicago.

Model: Toastmaster.

Description: This is a complete line of automatic gas water heaters featuring a fuse-bonded, aluminum-lined external flue and raised-port, precision-drilled burner.

It is equipped with Robertshaw-Grayson "Unitrol Senior" gas control with 100% shutoff.

Both top and side walls are insulated with Fiberglas. The line can be equipped optionally with the all-magnesium ionodic rod system of corrosion prevention at the discretion of consumer or dealer, depending upon the corrosive action of the water in the installation area.



The McGraw-built water heaters, for use with all gases, have been field-tested and marketed for the past two years under the trade name of "Scotch King."

Alcohol Injector

SOUTHWEST GAS EQUIPMENT CO.
Box 390, Liberal, Kan.

Model: SW-1, 2, 3, & 4 (quarts).

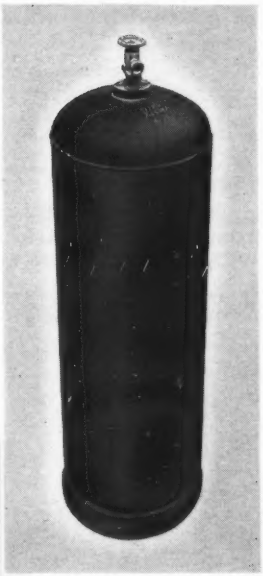
Application: For injecting alcohol into consumer tanks to prevent regulator freeze-ups.

Description: Injector is made with acme thread connections, male and female, to fit between the filler valve of tank and the bulk truck hose. Injector is filled with alcohol after connecting to tank; truck hose is then connected and pump started to force alcohol into tank. After closing valve on end of truck hose, liquid L. P. gas remaining in injector drains into tank. Bleeder valve is provided to release pressure following use.

Alternate method of use: Injector is connected to tank fill valve and filled with alcohol. By means of short hose with appropriate fittings, outboard end of injector is connected to vapor outlet valve of tank, and valve is opened to apply tank pressure to injector. As soon as pressure is equalized, weight of alcohol opens check valve in filler connection and alcohol flows into the tank. Thus, the injection can be made by serviceman traveling in pick-up without taking delivery truck off its route.

Smartest things you can do right now if you use 100 lb. capacity propane cylinders –

1. Check your present stocks.
2. Estimate your requirements for the next 6 to 12 months.
3. Order your immediate needs.
4. Place a contract for your next 6 to 12 months' requirements.



Harrisburg Lite-Weight Cylinder with red oxide ground coat.

Harrisburg Lite-Weight Cylinder with aluminum ground coat.

The character of the manufacturer shows in the product. These 100 lb. capacity, 72 lb. tare weight Lite-Weight Cylinders feature **maximum safety and quality with minimum practical tare weight** ... plus the inherently **longer life** built into them by Harrisburg. Made to I.C.C. Specification 4BA-240. Domestic and Export types.

HLW52-1

Have you read our Bulletin 466? Write for it today ... and for current prices on *any quantity* of cylinders you need.

99 Years in Pennsylvania's Capital

Harrisburg Steel CORPORATION

HARRISBURG 4, PENNSYLVANIA

Refrigerator

SERVEL, INC.
Evansville 20, Ind.

Model: 1952 Line.

Description: This new line includes such features as across-the-top freezers, automatic defrosting, moist-cold area, butter conditioner, odds-and-ends basket and shelves-in-doors for small food items, and dew-action vegetable and fruit fresheners.

Other features include a hors d'oeuvres tray, a quick-cold tray, adjustable shelves, and a new elbow-ease door latch. The door may be opened easily even though the housewife's hands are full.

In addition to the above innovations, Servel has provided increased food storage capacity while allowing for a decrease in the overall outside dimensions through use of a highly-concentrated insulation material and careful restyling of the cabinet.

A color choice is offered for interior trim of the refrigerator, the main color being blue with alternate choices of green or gold. Models range in size from 6 cu. ft. of food storage capacity to the 2-door, 11.5-cu. ft. model equipped with a separate freezing compartment.

Product Information

Soft water is now being termed the "4th Utility"—taking its place with the Big 3 utilities—gas, electricity, telephone—because it renders homes in hard water areas constant services on a permanent basis, according to the **Filter-Soft Corp.**, of Detroit, and the company is now offering gas dealers franchises as a profitable side line.

The idea is that since gas dealers have customers and trucks, they can deliver soft water filters on the same trips they make to deliver gas units—picking up empties, refilling them, and returning them to customers.

A clean, white, replaceable type filter for use in all forced air heating and cooling systems has been introduced by the **American Radiator & Standard Sanitary Corp.**, Pittsburgh, Pa.

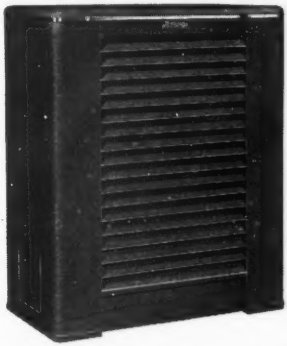
"Progressive packing" is featured in the new unit. The glass filaments of the American-Standard filter are packed evenly across the air inlet side and then packed progressively tighter all the way to the air exit side, with the glass filaments forming a continuous web that traps dirt on the inside rather than on the face of the filter. It is available in all standard sizes and special sizes are obtainable upon request.

Brilliant Fire
CIRCULATORS
FOR ALL GASES

LOWBOY console type. Sizes from 20,000 to 65,000 Btu. Ideal Heatmaker for home, store, office, lodgehall. A quality Circulator but budget-priced.

3-WAY Circulator with Pyrex glass front. Radiant heat to floor and circulated heat to living zone. 35,000 and 50,000 Btu sizes.

FULLY ENCLOSED. FULLY VENTED. BUILT-IN DRAFT DIVERTER AND FIXED PILOT. 100% WELDED FROM BURNER TO FLUE. AUTO-CONTROLS OPTIONAL.



WINTER Air Conditioner in 3 sizes to 75,000 Btu. Heats, circulates, filters, humidifies. Gentle fan-forced delivery heats from the floor up.

WRITE FOR CATALOG

Brilliant Fire
The OHIO FOUNDRY & MFG. CO.
Engineers · Manufacturers · Designers
STEUBENVILLE · OHIO · U.S.A.
Quality HEATING EQUIPMENT SINCE 1848

M. E. McKay Wins B-B Picture Contest

M. E. McKAY, one of the early pioneers in the liquefied petroleum gas industry, has been announced as the winner of The Bastian-Blessing Co. picture identification contest which was announced late last summer as a test of memory for gas men who were acquainted with prominent men in the industry more than a decade ago.

M. E. McKAY

Mr. McKay, who is vice president and general manager of the Hydro Gas Co. of West Florida, Pensacola, Fla., received $250 in cash for identifying the largest number of individuals among the 88 who are shown in the accompanying photograph. He was able to name 63.

Second prize of $150 went to R. Feild Foster, Lone Star Gas Co., Dallas, and third prize of $100 was awarded J. Woodward Martin, now with the Shamrock Oil & Gas Co., Amarillo, Texas.

The winners of the first three awards have long been identified with the L. P. gas industry in Texas and no doubt this gave them a wider acquaintance with members of the group than others from different states would have, as the meeting at which the picture was taken was held in Dallas Nov. 15, 1937.

Those pictured were attending a meeting upon that date for the purpose of organizing a national association for the L. P. gas industry and was called by Ellsworth L. Mills, vice president of Bastian-Blessing, with the plan to consolidate the then existing National Bottled Gas Assn. and the butane marketers of the South-

The contest picture showing members of the liquefied petroleum gas industry who attended a meeting held in Dallas, Texas, Nov. 15, 1937, to organize a national association.

do a better job—easier
WITH
METALBESTOS

Metalbestos is best for venting gas appliances because of these important features:

- All aluminum construction for high corrosion resistance... will not break, crack or shatter.
- Double wall design... an inner "hot stack" for strong draft, minimum condensation... an air-insulated outer pipe to keep surrounding walls cooler.
- Special precision-made couplers automatically align pipe sections... provide tightly sealed joints for complete protection against leakage.

In addition, Metalbestos can be installed *faster* and easier than any other gas vent approved by Underwriters' Laboratories. The patented couplers, adjustable lengths and other versatile fittings make assembly easier and faster, and eliminate crimping, cutting or tedious fitting.

Send for
FREE VENTING MANUAL

This useful manual, "Venting of Gas Appliances," contains important rules and helpful tips on approved venting practices. No cost or obligation. Write today to Dept. M

METALBESTOS DIVISION
WILLIAM WALLACE COMPANY • BELMONT, CALIF.

west into a joint organization. This effort was successful and became the forerunner of the present Liquefied Petroleum Gas Assn.

Consolation prizes of $25 each were awarded to those who correctly identified an individual in the group not named by any other contestant. These winners were Fred Henniger, Charlotte Tank Co., Charlotte, N. C.; Edward B. Tipton, Socony-Vacuum Oil Co., Damascus, Syria; Si G. Darling, Darlingas Co., Pratt, Kan.; and Loyd Welch, Southwestern Laboratories, Dallas.

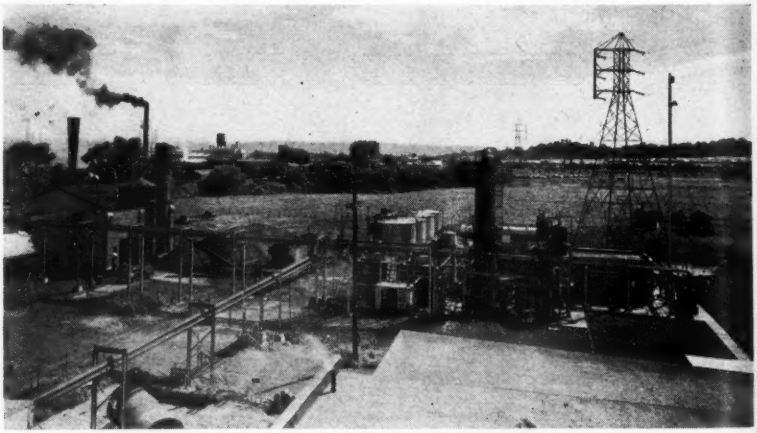
The Bastian-Blessing contest awakened wide interest in the industry in this group of early association workers and hundreds of individuals entered it.

Decolorizing of Oils Utilizes Propane

The use of propane for decolorizing animal, vegetable, and marine oils and fats for soap, cosmetic, and fatty acid manufacturers opens a new industrial application for the fuel.

Such an operation is being carried on at the processing plant of Refinol, Inc., Cincinnati. Because there are many opportunities for leakage of the propane in the process, special safety precautions have been taken to detect combustible mixtures. These consist of combustible gas alarms which alternately sample and analyze the atmosphere from eight strategic locations, and explosimeters to check areas where welding or burning is undertaken, both instruments made by Mine Safety Appliances Co., Pittsburgh, Pa. These operate automatically and register upon a central control board.

Processing capacity ranges from 90,000 to 120,000 lbs. per day of animal tallow and grease, with the utilization of approximately 240,000 gals. of propane circulated in the same period of time.



Overall view of the processing plant in Cincinnati, where 240,000 gals. of propane are used daily in decolorizing animal, vegetable and fish oils and fats.

Butane-Propane POWER SECTION

Installations CARBURETION Conversions

Taxicabs are good prospects for conversions. This one ran 100,000 miles on propane in one year.

Million Mile Taxi Record Shows *Propane Eclipses Gasoline*

By CARL ABELL

THE Santa Monica (Calif.) Cab Co. is completing its first year and its first million miles of operation on L. P. Gas. C. R. Hoyt, owner and operator, is enthusiastic over the results, in spite of a number of preliminary difficulties which were encountered in getting the operation on an even keel.

Fuel cost with propane has gone down 18% and the lowering of maintenance cost has been amazing.

A study of this company's experience will be of particular value to L. P. gas distributors, as it offers comparative data between gasoline and propane covering similar periods of time on fleets of the same size, working in the same city and under like conditions. Both fleets were new at the beginning of the test periods, and the total mileage was nearly the same figure, with each cab running close to 100,000 miles during the year.

The Santa Monica Cab Co. is a small fleet as taxi operations go—10 cabs in regular service, running two 10-hour shifts and covering an average of 260 miles per day each. These cabs are modified Ford sedans with the standard Ford V-8 engine. In addition, there are two DeSoto taxicabs, which are held in reserve for peakload service, and to replace any regular cabs which may be temporarily laid up for service work. (The comparative figures given below are based on experience with the Fords.)

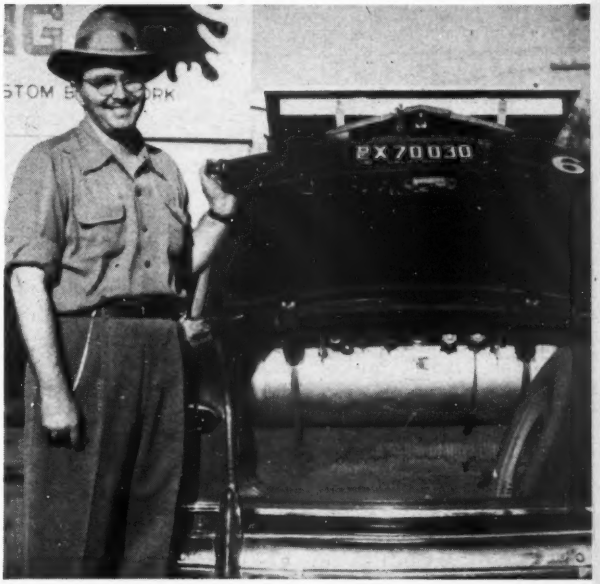
Fuel consumption averages about 7760 gals. per month—a nice account for any fuel distributor.

The change to LPG was made last March, following the exchange of the previous year's fleet for new

vehicles. Installation of fueling facilities and carburetion equipment was made by Mutual Liquid Gas Co., of Inglewood, Calif., on a long-term contract whereby the differential in fuel cost per gallon between propane and gasoline was applied to pay back the cost of the carburetion equipment, and the bulk storage and dispensing system could be purchased at the end of two years if the fleet operator desired to do so. The cost of carburetion equipment was paid out of fuel saving in less than six months.

It was anticipated that it might be necessary to operate on gasoline in emergencies when the demand for transportation was so great that returning to headquarters for refueling would interfere with customer service. The adapter type propane carburetor was selected and no changes were made in the engines except to install higher temperature thermostats. They still have the standard 6.8:1 compression ratios, and the regular gasoline manifolds, with no alterations.

Gasoline had been costing the cab company 18½ cents per gal. The contract price for propane is 14½ cents. This is a 22% differential, so a corresponding reduction of that amount in miles per gallon would have held the fuel cost per mile to a constant figure. Much to the surprise of everyone concerned,



C. R. Hoyt, owner of Santa Monica Cab Co., is pleased with the results of his propane operation. Picture shows how fuel tank is secured in trunk portion of taxicab.

Carburetion units on the Santa Monica fleet includes Dix (shown here) and Cyclone.

miles per gallon has been reduced only 4%, showing a net saving of 18% in fuel cost. (This result is possible in "stop-and-go" types of service, where gasoline operates at its lowest efficiency, due to poor vaporization and uneven distribution.)

The difference in repair cost has been tremendous. In the previous year's operation on gasoline, the repairs for the engines were negligible for the first three months. In the fourth month, they amounted to $120 for the 10 vehicles. They increased steadily to a high figure of over $1300 in the 12th month. The highest mileage attained between rebores was 45,000 miles.

With the new fleet on propane, the first three months also showed negligible cost for engine maintenance. For the next seven months, repair costs stood almost constant, betwen $30 and $40. The 11th month showed an increase to $257. Figures for the 12th month were not available, but all engines were still doing better than 400 miles per quart of oil, and cylinder compression was better than 90 lb. gauge pressure. There still had been no cylinder heads removed for any cause except to replace blown head gaskets. There had been no valve grinds and no rebores.

Oil has been changed in these LPG engines at 20,000 miles, except in a few instances where it appeared to be exceptionally dirty. This has happened only in instances where, for one reason or another, the engines have been operated for a number of hours on gasoline. Mr. Hoyt states that as little as two hours of operation on gasoline will produce discoloration of the oil, whereas it remains clear almost indefinitely if only propane is burned.

In the previous operation on

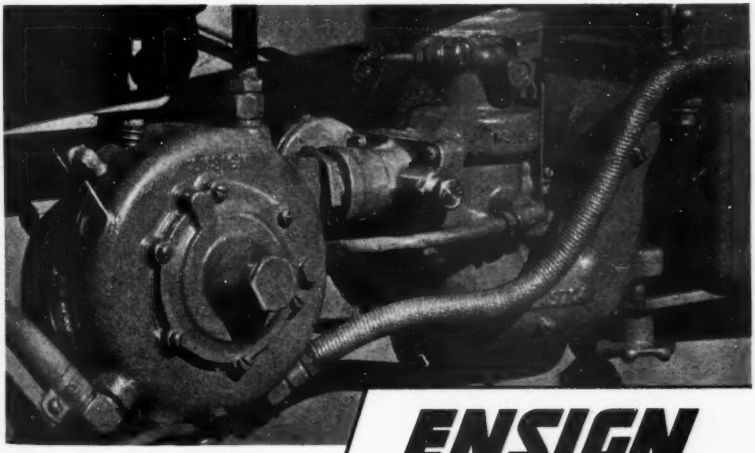
for the small agricultural tractor

ENSIGN LP-GAS CARBURETOR

Ensign's New Model "W" Vaporizing and Regulating Unit and Model "Xg" Carburetor

Here's a fast-selling LP-Gas carburetor and vaporizer assembly for small tractors and power units. It is simple, rugged and easy to install. Foolproof, easy to adjust and to service, every detail of the new Ensign Model "W" Vaporizer and "Xg" Carburetor has behind it nearly forty years of carburetor experience.

Illustrated here is the new J. I. Case Model "DC" LP-Gas Tractor, factory equipped with the Ensign "W" and "Xg." You too will find this equipment excellent in performance and readily accepted in the field. Insist on Ensign—take no substitute. It will pay you in the long run.



ENSIGN
CARBURETOR COMPANY

7010 S. Alameda, P. O. Box 229
Huntington Park, California

2330 W. 58th St., Chicago 36, Illinois

gasoline, crankcases showed heavy sludge deposits in spite of frequent oil changes. The propane engines remain clean, with no tendency to develop cold sludge, or "crankcase mayonnaise." The gasoline engines had been operated on SAE 30 oil, which thinned out in service. On propane, SAE 10 was used for the first 5000 miles, after which SAE 20 was used. Instead of becoming thinner, it thickened slightly with use.

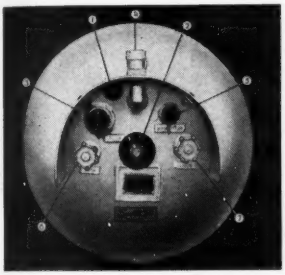
A number of problems either directly or indirectly related to fuel have been encountered. Spark plug life was at first considerably lower than in the previous gasoline operation. Conventional plugs broke down in about 12,000 to 14,000 miles. A number of experimental sets were tried, most of which did no better, but one set of aviation type plugs has been in constant service for over 80,000 miles, and is still performing satisfactorily.

It has been necessary to service the generators more frequently and to supply larger batteries in order to overcome starting difficulties. This is only partly due to the change in fuel. These cabs are equipped with an abnormal number of units which consume electric current. Two-way radios are in constant use. Extra lights are required on cabs, and illuminated identification signs consume current. Neon lighted advertising signs now adorn the trunk lids.

Fuel tanks are filled once each day. Only Mr. Hoyt, owner, and Arch Francis, fleet manager, have keys to the pump.

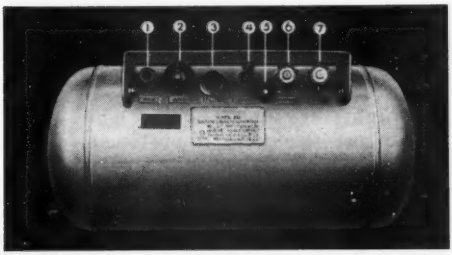
Santa Fe "CUSTOM-BUILT" LP-GAS Fuel Tanks

FOR TRACTORS AND TRUCKS



Custom-Built Mobile Fuel Tanks Complete with Mounting Brackets. No Holes to Drill—No Field Welding—Just Bolt Them On. Licensed and Bonded in States where required. Comply with N.B.F.U. specifications. Valves listed by U.L.—excess flow protection. Use of Hi-Tensile Steel reduces weight of tanks to a minimum, thus providing increased pay loads. Write for complete data.

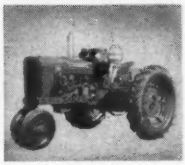
Santa Fe leads the field as the oldest and most reliable fabricator of custom-built fuel tanks for all tractor and truck applications. Leading tractor manufacturers select *Santa Fe* fuel tanks for their overall quality and outstanding performance. Why not profit by *their* preference for fuel tanks designed to satisfy specific customer requirements as compared to tanks designed for production lines? Write for specifications and counsel.



MINNEAPOLIS-MOLINE

FORD

OLIVER

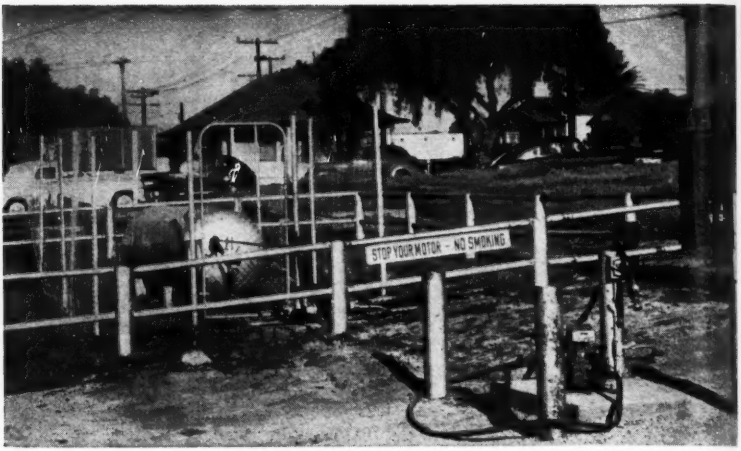


FARMALL

Santa Fe ENGINEERING & EQUIPMENT CO.

CUSTOM-BUILT PRESSURE VESSELS

MAYWOOD, CALIFORNIA, 3810 FRUITLAND AVE.
TULSA, OKLAHOMA, 2830 SAND SPRINGS ROAD

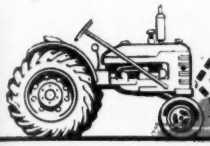


Fuel storage and dispensing equipment are thoroughly protected, and comply with all city ordinances.

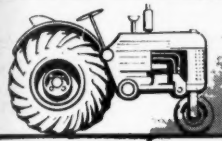
All lights are in use many more hours per day than is customary with privately owned automobiles. Standard batteries were inadequate, and had to be replaced with larger units.

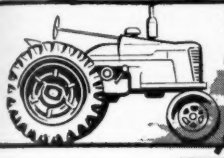
The two-way radios have made the operation much more efficient and have greatly increased the revenue per cab. The average trip consumes eight minutes and brings 70 cents in revenue. Before the driver reaches his destination he reports his location to the dispatcher and gets his next order, or stands by for instructions. During peak hours, only one minute of non-running time is lost in discharging passengers from one trip and loading up for the next. During off-peak hours, there is a longer interval between passengers. If the engine is kept running, the idling time averages 70 minutes per day, and in the 10-cab fleet this consumes 7000 gals. of fuel per year, at a cost of approximately $1000.

To prevent some of this loss, regulations require that engines shall be stopped when the cab is not running. This was difficult to enforce. The drivers preferred to leave the engine running if it was hard to start, and they quickly found that starting was a little easier on gasoline. It was easy to switch to gasoline with the electric fuel control valves which were originally installed. These are being replaced with oil pressure controlled fuel locks on the L. P. gas line, and manually operated gasoline valves.



3-C type for all tractors





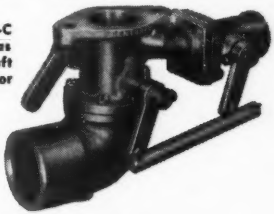
CENTURY CARBURETORS are now available in ⅞" and 1" sizes as well as the larger sizes ranging from 1¼" to 2½". These smaller Century Carburetors are built especially for small agricultural tractors and are made with special flanges for powering Model "D" Case, "L" Case, 99 Oliver and other makes of tractors.

Get easy starting and perfect idling with Century Carburetors because they are a metering type valve—not a venturi type. They proportion air and fuel to exact ratios. You'll get greater lugging power, longer engine wear and save fuel with Century Carburetors.

SET IT
SEAL IT
AND FORGET IT

Model M-2 Converter

Model 3-C LP-Gas Updraft Carburetor



CENTURY

Oldest Manufacturer of LP-Gas Carburetion

CENTURY GAS EQUIPMENT CO.
11188 LONG BEACH BLVD., LYNWOOD, CALIF.

CARBURETORS for LP-Gas

The emergency brakes are fitted with microswitches which turn off the ignition and the headlights when the brake is applied. This combination saves a great deal of fuel, and causes the drivers to report at once when the engines become hard to start on propane. Better electrical maintenance, cleaner oil, and lowered operating cost have followed.

The driver staff at various times has included from one to three women. They have experienced no more difficulty in learning the details of the mechanical operation of the propane carburetion system than have the men, and have been more inclined to follow out their operating instructions than the men.

The storage tank for the propane is located about a block from the company office. It holds 500 gals. and is refilled nearly every day. A larger tank would be advantageous but this is the maximum container permitted by city ordinance in this particular zone.

Watch All Safety Angles

Fuel tanks in the cabs hold 27 gals. net, and are filled once each day, unless a rush of business makes this impossible. For safety reasons, only two men carry keys to the dispensing pump—Mr. Hoyt and Arch Francis, who is in charge of the mechanical part of the operation. In conformity with state regulations, large vents have been cut in the bottoms of the trunks, and as an added precaution, the compartment is sealed so fuel vapor cannot pass through to the passenger space. After filling the fuel tank, the car jack is placed in the trunk opening, holding the lid up about 2 in. The driver is required to drive the block to the company office before turning on his lights or closing the trunk lid. This aerates the trunk thoroughly, and carries away any fuel vapor which may have escaped into the trunk when the hose was disconnected.

Fire Chief Approved Installation

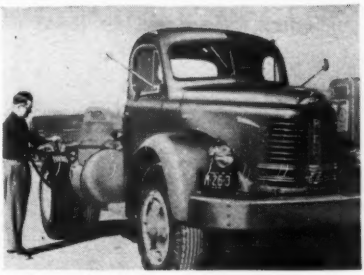
When the change to propane was first made, a rather serious public relations problem arose. Many of the neighbors opposed the location of the storage tank and petitioned the city council to require its removal. As the installation had been made in strict conformity to the city regulations, nothing could be done to prevent its use. The company officials had a conference with the fire chief and other interested city officials, and set up a safety program which was accepted as adequate. The unfavorable publicity resulting from the agitation in the city council affected patronage for a few days but it was soon forgotten and business went back to normal.

The Ford cabs in this fleet were leased from a dealer, on a six months' contract. This term was set because previous experience on gasoline indicated that by the time they had operated in cab service for from 45,000 to 50,000 miles, the engines would require rebuilding or replacing. At the end of six months on propane the engines were still in such good condition that the lease was prolonged by mutual agreement to one year. Mr.

Hoyt now believes that he will be money ahead to purchase cars for replacement of the present fleet instead of leasing. The tanks and carburetors now in use will be transferred to the new cars, and will go right on saving money and time for the Santa Monica Cab Co.

Reo Announces Engine Designed For LPG

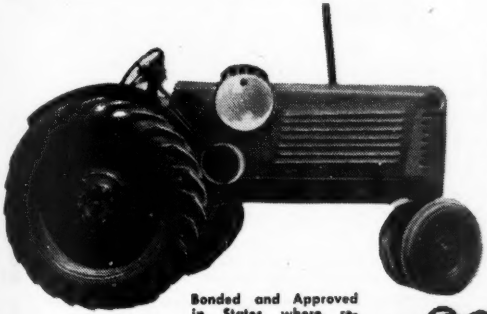
Reo Motors, Inc., has announced the availability of the new Reo 331 "Gold Comet" engine, completely engineered and equipped at the factory for operation on L. P. gas. This is a 331-cubic inch engine (bore, 4⅛ in.; stroke, 4⅛ in.), developing 142 horsepower at 3200 rpm. It is the largest of the three engines manufactured by Reo, and is similar to the 331 cubic inch gasoline engine which the company has sold for several years.



A "tractor" model in a new series of Reo trucks powered by LPG.

The L. P. gas version of the engine

MANCHESTER TRACTOR TANKS *give Custom Conversion*



Bonded and Approved in States where required.

For the type tractor illustrated they provide a neat streamlined appearance. The driver has unimpaired vision for all types of work. Tanks come equipped with mounting brackets and hood supports. Installation time is reduced to an absolute minimum.

All valves are UL approved and conform to all industry standards. Custom designed Manchester tanks with suitable mounting brackets are available for all makes and models of trucks and tractors. They are machine welded and manufactured by production line methods for uniform strength, dependable service and finished appearance.

Operating safety and savings are the result of Manchester's field experience with all types of mobile equipment.

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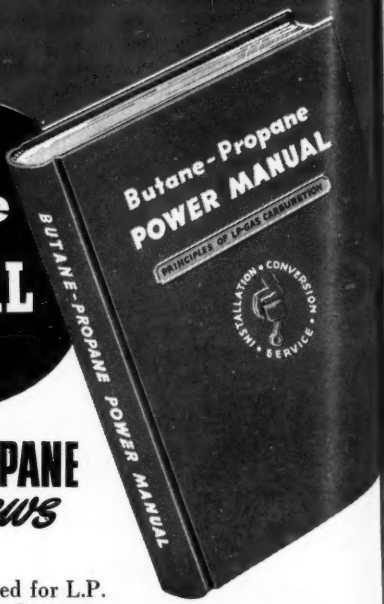
JUST OFF THE PRESS

Butane-Propane POWER MANUAL



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Here's the expert "know-how" you need for L.P. gas conversions—to cash-in on the profit opportunities offered by the rapidly-expanding L.P. Gas Power Market.

Contains six separate sections with 23 chapters. In every day language it gives you the full story of liquefied petroleum gas installation methods, equipment and service—from the tools you need to sales hints for handling this new business profitably and with assurance.

Over 40 leading manufacturers of quality equipment cooperated with the author, Carl Abell, to bring you the basic facts about power and fuel . . . carburetion . . . conversions . . . installation . . . maintenance and trouble-shooting . . . factory approved step-by-step instructions for adjusting all makes of L.P. gas carburetors and much more.

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Heavy-Duty Flexible Binding

PART 1

The Basic Facts of Fuel and Power

- The Nature of Various Automotive Fuels
- Basic Engine Facts
- The Nature and Control of Combustion
- Factors Affecting Economy and Power

PART 2

LP-Gas Carburetion

- LP-Gas Carburetors
- The Regulator or Converter
- Fuel Supply—Vehicle Tanks and Equipment
- Natural Gas Carburetion

PART 3

Making the Conversion

- Planning the Installation
- Checking the Engine Condition
- Raising the Compression Ratio
- Cooling Intake Manifolds
- Truck and Bus Conversions
- Tractor Conversions
- Passenger Car and Taxi Cab Conversions
- Industrial and Special Applications
- Ignition Problems

PART 4

Installing and Adjusting LP-Gas Carburetors

- Principles Applicable to All or Several Makes
- Instructions for Servicing the Various Makes of LP-Gas Carburetors Now on the Market

PART 5

Maintenance and Trouble Shooting

- Lubrication of LP-Gas Engines
- Trouble Shooting

PART 6

Bringing in the Business

- Selling LP-Gas Carburetion
- The Storage and Handling of LP-Gas

Appendix

Handy Tables in Text

Butane-Propane News • 198 S. Alvarado St. • Los Angeles 4, Calif.

Gentlemen: Please send.....copies of the new Butane-Propane POWER MANUAL. I enclose $.....

Price $3.50

(in California add 3% Sales Tax)

We pay postage on orders accompanied by remittance.

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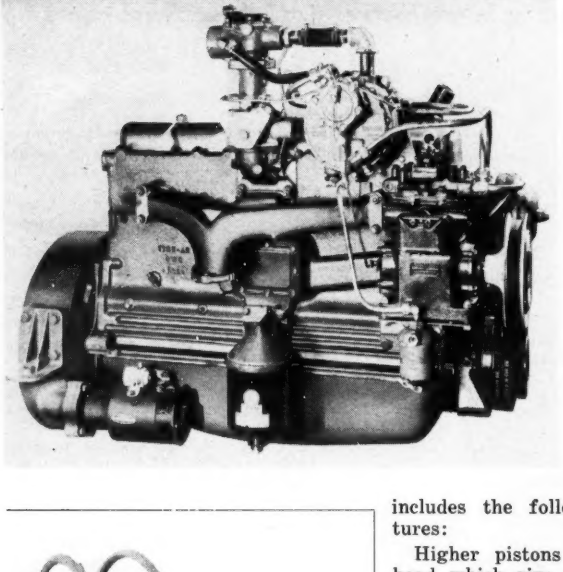


Reo Motors' new 331-cu. in., 142-hp. truck engine, designed for L. P. gas. Compression ratio, 8.2:1.

includes the following special features:

Higher pistons and a redesigned head, which give a compression ratio of 8.2:1.

Completely separate intake and exhaust manifolds, the intake being designed into the head, where it is water jacketed and completely protected from radiant heat from the exhaust manifold.

Special piston rings designed for quick breaking in on L. P. gas.

Heat resistant alloy steel intake and exhaust valves, with rotators on the exhausts, and high-alloy seat inserts for both intake and exhaust valves.

A new distributor designed to match the combustion characteristics of L. P. gas.

Ensign carburetion equipment.

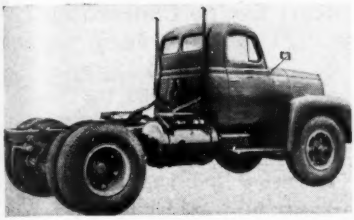
This engine is available as the power plant for any Reo chassis of suitable size, or as a replacement engine for other trucks.

for BUTANE or PROPANE

Spring Operated

ACE HOSE REEL CO., LTD.

5446 Alhambra Ave., Los Angeles 32



One of several International truck models now available with factory-installed L.P. gas fuel systems as optional equipment.

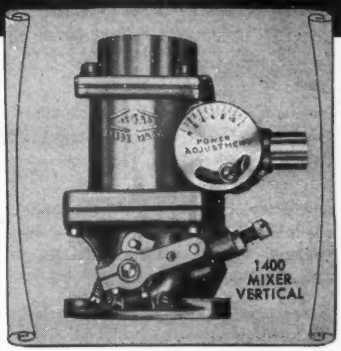
LPG Engines Now Available In International Trucks

The motor truck division of International Harvester Co. has introduced three factory-built L. P. gas engines, according to W. K. Perkins, manager of motor truck sales. These three engines are optional equipment in all of the company's truck models using the Super Red Diamond engines. Displacements are 372, 406, and 450 cubic inches. The engines and the various components of the trucks are Underwriters Laboratories listed.

In addition to L. P. gas carburetion, the engines have higher compression ratios than the corresponding models of gasoline engines, and the intake manifolds are completely divorced from the exhaust system. Fuel supply on the trucks consists of dual 62-gallon water capacity tanks. Electric fuel shutoff valves are supplied, and the safety relief valves are vented above the tops of the cabs.

These are the first L. P. gas models produced by International at its Eastern factory, although the West Coast plant at Emeryville, Calif., has been producing extra heavy duty models with optional LPG fuel equipment for the past several years.

IMPROVED ENGINEERING AND ADVANCED DESIGN



Brings Greater Flexibility to ALGAS Carburetors

Pioneers in the LP-Gas Industry, ALGAS. is constantly improving their equipment to serve better the expanding needs of their field. Now ALGAS offers a new, improved design in their 1400 Series Mixers that greatly expands the flexibility of installation. Write today for information and specifications.

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Hundreds of successful L-P installations have proved the effectiveness of Ellis "Bu-Power" Manifolds. More power and mileage for your customers . . . and more customers for you. Every conversion is a better conversion when you use an Ellis Manifold designed especially for L-P gas.

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Underwriters Approved

DIX *Butane-Propane* **CARBURETORS**

For cars, trucks, tractors, Sta. Engines.
They're called "The Profit Line"

***BECAUSE* — the DIX is —**

The Simpliest of them all
The Easiest to Install
They're no trouble at all

Immediate Delivery from Stock
Write for Dealer Information

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Los Angeles 23, Calif.
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Discuss Engine Conversions At "U" of Calif. Farm School

Nearly 400 farmers and farm implement dealers attending the 21st annual Farm Machinery Conference at the University of California farm school at Davis, on Feb. 2, listened to a discussion and analysis of "The Place of L. P. Gas as Tractor Fuel," by Lloyd H. Lamouria, of the university's Division of Agricultural Engineering.

The material presented by Mr. Lamouria was gathered from L. P. gas carburetion and tractor manufacturers, the LPGA, numerous trade magazines, Iowa State College, and tractor operators. It included data covering typical conversions, operating costs, and formulas with which the operator can predict the facts in his own individual case.

His conclusions were that L. P. gas offers numerous advantages from the operating standpoint, and that where normal differential exists between the cost of propane and gasoline, any tractor operator using his machine between 400 and 1500 hours per year should investigate the possibility of saving money by converting his engine.

Houston Firm Purchases Truck, Storage Equipment

The Petro Gas Co., Houston, Texas, has purchased the trucks and storage equipment of the Pittsburg Appliance Co., operated by L. K. Haines.

Petro Gas will serve the retail customers formerly served by the Haines organization. Mr. Haines, however, will continue to operate his appliance and plant business at 2901 Main St., Houston.

The Petro Gas Co. is owned by the Robertson Transport Co.

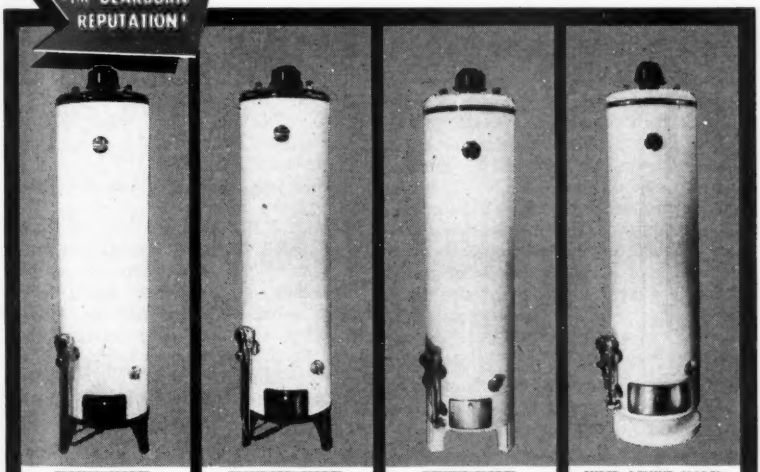
Dearborn's IN HOT WATER

(and loves it!)

NOW..THE MOST FAMOUS NAME IN GAS SPACE HEATERS BRINGS YOU AUTOMATIC GAS WATER HEATERS!

Here they are a brand new line of water heaters carrying the DEARBORN name -the DEARBORN REPUTATION!

Big name in the gas space heater field, now Dearborn introduces a complete new line of dependable, economical gas water heaters. It's a line you can sell with the same pride and confidence that dealers all over America sell famous Dearborn gas space heaters.



SPECIAL MODEL
- Lifetime Fiberglas insulation
- Grayson Unitrol Jr. thermostat and automatic pilot
- Copper-bearing steel galvanized tank
- Carries a 1 year warranty against tank leakage

STANDARD MODEL
- Lifetime Fiberglas insulation
- Grayson Unitrol Jr. thermostat and automatic pilot
- Durable copper-bearing steel galvanized tank
- Carries a 3 year warranty against tank leakage

DELUXE MODEL
- Lifetime Fiberglas insulation
- Grayson Unitrol Jr. thermostat and automatic pilot
- Heavy duty copper-bearing steel galvanized tank
- Carries a 5 year warranty against tank leakage

SUPER DELUXE MODEL
- Lifetime Fiberglas insulation
- Fully automatic Grayson Unitrol thermostat and safety pilot
- Extra heavy duty copper-bearing steel galvanized tank
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For more sales • more profits • feature the water heater with NAME RECOGNITION ... NAME REPUTATION

DEARBORN ... one of the most honored names in American industry

Dearborn STOVE COMPANY

CHICAGO • DALLAS

Extensions to throttle and clutch give Schagrin Gas driver complete control of delivery operation from one station at the meter.

Improved Truck Design Permits Better Transfer Operation

Schagrin Gas Co., of Middletown, Del., has recently placed in service a new cab-over-engine GMC 1200-gallon bulk delivery truck which includes special features which are proving advantageous.

In addition to having all piping, valves, meter, and pump enclosed inside a streamlined steel housing, complete control of unloading is provided at the operator's station at the rear. The meter and control valves are grouped with remote controls to the clutch and the throttle. Thus, with the Smith pump operating from the power-take-off, speed of delivery may be increased or slowed down. A Fisher adjustable by-pass valve offers protection to the pump and meter in case of an emergency which might require quick closing of the outlet valve.

An electric operated hose reel with 150 feet of hose is located inside the extension of the chassis frame, which, with a broad rigid bumper, offers excellent protection against collision. Heavy diamond tread steel guards extend all around the tank. Double pintle hooks at both the front and rear provide the means of extricating the truck in case it bogs down or goes through the top of a septic tank while making a rural delivery. The truck is the product of Charlotte Tank Co., Charlotte, N.C.

The truck engine has been converted for operation on propane, by installing 8:1 compression ratio pistons and Ensign carburetion system. According to Milton Levinson, general manager, this provides ample power and excellent economy.

Union LP-Gas Systems Buys Another Kansas Company

The Union LP-Gas Systems, Inc., owner of 11 butane and propane plants in southeast Kansas, has purchased the Butane Equipment Co., south of Fort Scott, Kan., on US-69, from Mr. and Mrs. D. R. Abbott.

The Abbotts, who were operators of one of the oldest bottled gas distributing agencies in the Fort Scott area, having begun operation in 1940, intend to establish a new butane-propane plant in Boise, Idaho.

Proprietors of the plant are E. A. Brown, Independence, Kan., and Glenn McGuire, Iola, Kan. Operator of the plant is William E. Jerome, who has been in the employment of Union for six years.

The new owners are offering the territory around Fort Scott new services. They will install gas meters on individual tanks at the request of local customers.

McGuire and Brown said the Union L. P. system in southeast Kansas has a total storage capacity of about a half-million gallons. The Fort Scott plant has a capacity of 54,000 gallons. In addition, Union has a fleet of 35 trucks operating in Kansas. Each of the trucks is powered by propane fuel.

Other Union system plants are located at Ottawa, Iola, Parsons, Pittsburg, Chanute, Fredonia, Caney, Burlington, Osage City, Paola, and Pleasanton, all in Kansas.

New Engineer's Thesaurus Covers Gases, Combustion

"The Engineer's Illustrated Thesaurus," by Herbert Herkimer, has just been published by the Chemical Publishing Co., Inc. It contains over 8000 illustrations of machine elements and assembled machinery for the engineer, designer, draftsman, and manufacturer to select the machine parts or equipment most suitable for his special purpose.

Every conceivable type of machine element is clearly reproduced and identified. Where necessary, an explanation of the method by which it accomplishes its particular function is given. An exhaustive index is also included.

Main classes treated in the book include transmission of liquids and gases; combustion; prime movers; fasteners; adjusting devices; supports and structures; basic mechanical movements; elevators, cranes, derricks, conveyors; transportation; industrial processes; comfort heating, cooling and air conditioning; and electrical appliances.

The book contains 572 pages, sells for $6 per copy and is available from the Chemical Publishing Co. at 212 Fifth Ave., New York 10, N. Y.

August Anneberg Purchases Fort Scott, Kan., Firm

August Anneberg, Fort Scott, Kan., has purchased the Fort Scott Community Supply Co., distributors of liquefied petroleum gas. The firm will now operate under the name of Anneberg LP-Gas Co.

Mr. Anneberg, who had been a motor car salesman for the Griffith Motors, Fort Scott, assumed immediate possession of the firm. He is active manager.

Located south of the city limits on US-69, the firm has been supplying propane to local farms, homes and industries.

Resident agent at the bulk plant is Frank Becco.

Two-Way Radio Systems Increasing Rapidly

Adding to the growing list of butane-propane dealers equipping their truck equipment with two-way radio communication systems is the recent installation by the Liberty County Butane Co., operating out of Liberty, Texas.

An aerial tower was installed at the rear of the company's office and control equipment set up in the office of "Red" Burns, head of the firm. The system is expected to have a range of upwards of 50 miles and will keep all delivery and service units in contact with headquarters.

Anco Manufacturing Co., Tulsa, Okla., has established a warehouse point for the Anco ICC "Pig" cylinder at Merchant's Warehouse located at Morgan & Water Sts., Tampa, Fla., to serve dealers in the Southeastern section of the country.

Anco has also recently become a distributor of the Rockwood ball-type valve manufactured by Rockwood Sprinkler Co., Worcester, Mass. This line will be warehoused at the Tulsa headquarters of Anco as well as other distribution points, including E. St. Louis and Omaha branches.

Newly appointed sales manager of the propane equipment department of **Black, Sivalls & Bryson, Inc.**, is B. Duane Love, a salesman in the department for the past six years. In making the announcement, M. G. Purpus, general sales manager of the special products division of the firm, said that Mr. Love will be located at BS&B's Kansas City, Mo., office.

B. DUANE LOVE

Before joining the firm, Mr. Love was a supervisor for an independent oil firm and an expediter for North American Aviation.

Organization of a new engineering and research division of the **John Wood Co.** has been announced by President J. B. Balmer. P. S. Lyon has been named vice president in charge of engineering and will head the new division.

The new division, as part of an overall program of expansion, will be engaged primarily in the acquisition and development of new products for all manufacturing divisions of John Wood and its Canadian affiliate, John Wood Co., Ltd.

The retirement of M. G. Kahle as a member of the board of directors and director of purchases of **Magic Chef, Inc.**, has brought about the election of Harold H. Gearhart, controller, to the board and the naming of Fred J. Risberg as director of purchases. Mr. Kahle retired Jan. 30 after 41 years with the firm.

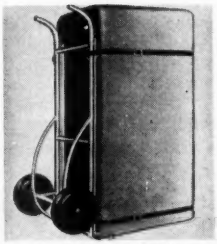
For the past five years Mr. Risberg has served as assistant purchasing director.

In line with the development of Magic Chef's heater sales department,

3 Easy Steps

FOR DELIVERING APPLIANCES with a Model 229 M/W Hand Truck

***Price only* $47.60** Complete with 12" pneumatic tires and two web straps.



1. STRAP IT ON—Strap the Refrigerator, Range, Deep Freeze, Water Heater, or other appliance on the M/W Truck.

2. LOAD IT UP—Load it on your delivery truck—note how the sweeping axle hangers facilitate loading and unloading.

3. WHEEL IT IN—It's easy to take a heavy appliance up long stairs with the M/W Truck—soft 12" tires permit moving over linoleum and carpets without damage.

MANUFACTURED BY
MOELLENBROCK & WILKE
WASHINGTON, MO.

Dept. B,
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Washington, Missouri

Red-Ray

Radiant Burners For Industrial Drying

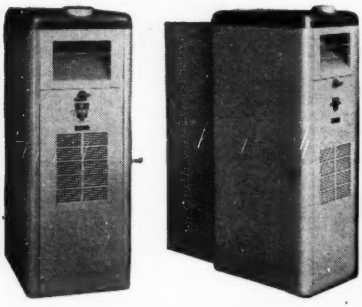
Let us show you and your customers what Red-Ray Burners can do.

Illustrated at right, Red-Ray Burners installed under steam dryers in a textile mill.

Write for information.

Red Ray Manufacturing Co., Inc.
455 W. 45th St., New York, N. Y.

ONE PACKAGE ELIMINATES DUPLICATE STOCK



FOR CLOSET INSTALLATION

FOR BASEMENT INSTALLATION

BTU INPUT
62,500
80,000
100,000
125,000
160,000

● *You're bound to profit when you sell this compact unit with its flexibility of installation. It's the latest thing in home comfort and ease in handling.*

SECURITY MFG. CO.

1630 Oakland Kansas City 3, Mo.

SECURITY

MODEL SFA FURNACES

LP GAS

John M. Bayer has been named heater sales manager of the Southwestern division, according to Marc W. Pender, vice president in charge of sales.

Other recently appointed division sales managers of the heater division include B. J. Carlson, Eastern; P. R. Newkirk, Central; S. B. Holden, Atlantic; C. L. Gunter, Southeastern; and J. A. Gallagher, Northern.

Andrew F. Cassidy (right), new "Knight of the Court of Flame," is congratulated by J. P. Hutchinson (left), chairman of the water heater division of GAMA, and H. Leigh Whitelaw, GAMA managing director. Mr. Cassidy, manager of water heater sales for Rheem Manufacturing Co., received this award recently in recognition of his outstanding contributions to the gas water heater industry.

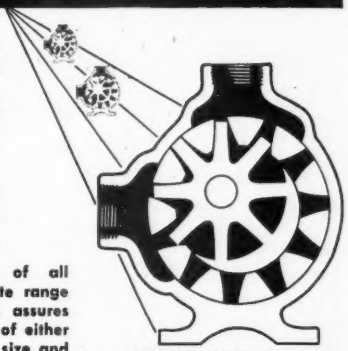
A. W. Ambrose, president of Cities Service Oil Co. of Delaware, with headquarters in Bartlesville, Okla., has been named chairman of the board of that company, according to W. Alton Jones, president of the parent Cities Service Co., as a step in providing for the growth of business and expansion of facilities.

Succeeding Mr. Ambrose as president is S. B. Irelan, president since

WHERE VIKING PUMPS LEAD . . . OTHERS FOLLOW

Viking—the original "gear within a gear" pump is the most copied of all rotary pumps. Feature after feature, improvement after improvement FIRST appearing in VIKING pumps is copied by many manufacturers.

When you need pumps, specify the original "gear within a gear" Viking to be sure the pump is built for your job.



VIKING PUMP ORIGINAL GEAR-WITHIN A-GEAR PRINCIPLE

Fast, positive self-priming of all Viking pumps in the complete range of sizes, ½ to 1050 gpm, assures you of dependable pumping of either light or heavy liquids in the size and style needed.

Ask for descriptive bulletin 2303B today.

VIKING PUMP CO. CEDAR FALLS IOWA

The Line for you . . . in '52

★ Pull in Sales ★ Satisfy Customers!

Martin

V170

GAS SPACE HEATERS

Stock the Complete Line

8 Fully Vented Heaters 15,000 BTU to 85,000 BTU

22 Unvented Heaters 10,000 BTU to 50,000 BTU

Over 45 years stove experience

All Martin heaters AGA approved

Write your jobber or direct for complete catalog.

MARTIN STAMPING & STOVE CO., Huntsville, Ala.

Liquefied Petroleum Gas

Cities Service Oil Co.

•

A DEPENDABLE SOURCE
UNIFORM PRODUCTS
A CAPABLE SUPPLIER
TWENTY YEARS' EXPERIENCE

•

IN LP GAS ALSO
CITIES SERVICE
MEANS
GOOD SERVICE

•

CITIES SERVICE
OIL CO.
(Del.)

•

BARTLESVILLE, OKLA.
CHICAGO, ILL.

Other Sales Offices

Cleveland — Kansas City
St. Paul — Toronto

1944 of the Cities Service Gas Co., Oklahoma City. Glenn W. Clark, formerly vice president and general counsel, succeeded Mr. Irelan.

In this move, Mr. Ambrose completes an executive reorganization program which he initiated last year and which will enable him to devote his principal attention to the extensive exploration and production activities of the company in both the domestic and foreign fields, according to Mr. Jones.

Mr. Irelan, associated with Cities Service since 1909, has held many key executive positions in the organization in the natural gas, petroleum, and electric utility fields.

The L. J. Mueller Furnace Co., Milwaukee, celebrating its 95th anniversary of manufacturing heating equipment, has announced the appointment of two sales representatives.

Harry M. Harris has a territory which includes parts of Missouri, Nebraska, Iowa, Kansas, and Oklahoma. He will operate out of Marion, Kan.

R. C. Drew covers a territory comprising southern Michigan and the northern parts of Indiana and Ohio. He will headquarter in Bowling Green, Ohio.

William Wallace Co., Belmont, Calif., has appointed Joseph Malo assistant to A. O. Hawley, Jr., vice president and sales manager of the firm.

Mr. Malo was formerly production superintendent of the firm.

J. W. Ostler, manager of Canadian Meter Co., Ltd., Hamilton, Ont., "Maple Leaf Division" of **American Meter Co.**, has announced the Barchard Engineering & Equipment of Edmonton, Alberta, will now be operating as the Western division of Ca-

nadian Meter, Ltd. Barchard Engineering has represented American Meter in Western Canada since 1949.

Mr. Ostler has also announced the appointment of F. M. Barchard as manager of the new division, which will operate in British Columbia, Alberta, Saskatchewan, and Manitoba.

Well Equipment Manufacturing Corp., Houston, Texas, has appointed **Gas Equipment Co., Inc.**, Dallas, and **Gas Equipment Supply Co.**, Atlanta, as master distributors for "Weco-Trol" automatic main discharge valves for L. P. gas trucks.

The two distributing companies, serving dealers in Texas, Louisiana, Arkansas, Mississippi, Alabama, Georgia, Florida, North and South Carolina, Oklahoma, Missouri, Kansas, and Tennessee, have an interesting mailing piece for their customers. Not only does the brochure contain information about products in stock, it carries a safety or information message to the industry as well.

Odin Stove Manufacturing Co., Erie, Pa., has announced the purchase of the interests of R. F. Hoffstetter. Mr. Hoffstetter, formerly president of the firm, will remain as chairman of the board.

The following officers were appointed to the board: E. C. Fisher, president; K. C. Hampel, treasurer and general manager; and T. P. Dunn, secretary. E. K. Hampel was named general sales manager and A. E. Koch was named director of purchases.

Appointment of Emil P. Nensel as sales manager of the water heater division of **Servel, Inc.**, is announced by W. Paul Jones, president of the firm.

Mr. Nensel, who has been with Servel since 1936, has served successively as sales-service engineer in the

Chicago Awaits You!

Don't Miss LPGA's Big Convention and Trade Show

☆ Chicago will be the mecca for LP-Gas men and women from the length and breadth of the land when the Liquefied Petroleum Gas Association holds its 1952 Convention and Trade Show in the Palmer House May 12-14. Join the crowd!

Offering the best speaking program and biggest exhibit of LP-Gas appliances and equipment in industry history, this year's get-together will be a memorable event. Interesting talks by prominent speakers on pertinent national and industry problems . . . sectional meetings where you can ask questions and learn how the other fellow does it . . . latest information on government controls and restrictions . . . new ideas galore that spell bigger profits, more satisfied customers. Lots of fun and entertainment, too!

Whether you're an LPGA member or not, you are cordially invited to attend. Make room reservations with the hotel.

LIQUEFIED PETROLEUM GAS ASSOCIATION, INC.
11 S. LaSalle St., Chicago 3, Ill.

- Holds Pressures—Prevents Leakage
- Stops Gasket Sticking and Failure From Leakage
- Prevents Thread and Stud Galling or Seizure
- Never Hardens—Joints Easily Separated
- Prevents Rust and Corrosion
- Insoluble in All Petroleum Products

PLS

PLS is the one dependable sealing compound used by bulk plant operators everywhere. It's a sure-cure for costly leakage and maintenance.

PLS is insoluble in a wide variety of services, including any petroleum liquid or gas . . . seals effectively at temperatures to 550°F. and pressures to 6000 psi.

TRY A SAMPLE AT OUR EXPENSE. Write Dept. B-3. 1838 Cuyler, Chicago 13, Illinois, for your free sample jar of PLS.

Approved by Underwriters' and the Butane Propane Institute of Louisiana.

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JOHN CRANE CRANE PACKING CO.
CHICAGO

refrigerator division, service manager of the water heater division and assistant manager of the appliance service department of the company.

William A. Bauer, director of the foreign division of **American Radiator & Standard Sanitary Corp.**, Pittsburgh, Pa., has been appointed to the firm's operating committee by Theodore E. Mueller, president. The committee functions as an advisory board to the president on company policies and procedures.

D. D. Couch, American-Standard vice president of sales, has announced that Nicholas H. Richfield is the new manager of the application selling department, succeeding Walter Wehner who died recently. Mr. Richfield has been with the firm since 1938.

R. R. Cole, vice president of Security Manufacturing Co., passed away late in January. Mr. Cole had been associated with Security for 36 years —first as a salesman then as a sales manager and last as vice president.

A veteran of 20 years' service in the marketing department of the **Continental Oil Co.**, A. D. Maxwell, assistant director of sales administration, has been promoted to manager of the company's liquefied petroleum gas division. In making the announcement, O. B. Lloyd, general sales manager, said that Mr. Maxwell will continue to make his headquarters in Ponca City, Okla.

Due to the reorganization of **Rockwell Manufacturing Co.'s** sales structure, W. S. Andrews has been appointed New York district sales manager, succeeding the former manager, Mr. Harper, who has been promoted to coordinate sales for the Boston, New York, and Philadelphia territor-

ies. Mr. Andrews had been Pittsburgh district sales manager for seven years prior to his recent promotion.

The appointment of Harold A. McDermott as manufacturers representative for the entire upper New York area has been announced by **Madden Brass Products Co.**, Chicago. Mr. McDermott has had 18 years' experience in the brass industry.

J. E. Wellmuth is the newly appointed branch manager of **Empire Stove Co.**'s Chicago territory, according to Vice President L. A. Brand. Mr. Wellmuth, formerly of the house heating division of the People's Light & Coke Co. and the Public Service Co. of Northern Illinois, has established his office at 7856 S. Ashland, Chicago.

F. L. Brewer has been named purchasing agent of the Houston Works of the **A. O. Smith Corp.** succeeding W. H. Coyle who has been transferred to a staff position.

Mr. Brewer joined A. O. Smith in 1945 and has served as senior accountant, assistant chief accountant, manager of production control, and production control coordinator.

Harold Twitty is the new advertising manager for **Temco, Inc.**, Nashville, Tenn., according to word from Frank Toler, sales manager.

Mr. Twitty in the past served as account executive for the agency handling the Temco account, as a United Press correspondent, and as advertising manager of a Nashville electric utility.

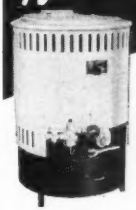
The appointment of Edward H. Clarac as sales promotion manager has been announced by Mike Reagan, general manager of Edwin Flato Co.,

REGO
LP GAS EQUIPMENT

Rochester Criterion Gauges—Aeroquip Hose and Fittings—Weco-Trol (automatic control) I C C Cylinders—Okadee Valves

GAS EQUIPMENT SUPPLY CO.
127 ELLIS ST. N. E. ATLANTA, GA.

Now! YOU CAN SELL
(A.G.A. APPROVED)
Incinor
AUTOMATIC
INCINERATOR
as a year 'round load builder



INCINOR is the only gas-fired incinerator offering standard units in both 2-bu. and 4-bu. sizes.

APPROVED BY A.G.A. FOR USE WITH LP-GAS

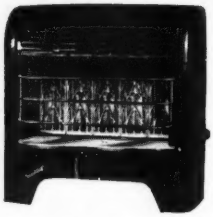
LP-GAS DEALERS DO WELL WITH INCINOR
Phone, wire or write the factory for REASONS WHY.

Bowser, Inc., Incineration Div.
CAIRO, ILLINOIS

ARMSTRONG

A G A Approved

RADIANT GAS HEATER



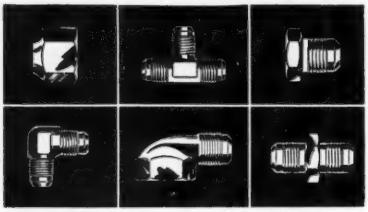
An excellent heat provider for fireplace or living room. Body is in one piece, brown porcelain enamel finish. Chrome plated reflector and dress guard. 17¼" high, 18½" wide. 8" deep. 20,000 B.T.U.

No. 2205 for Natural and Mfg. Gas.
No. 2205B for LPG Gas.

Order from your Jobber or write for literature on complete heater line.

WHEN IT'S AN ARMSTRONG DEPEND ON IT! IT'S THE BEST OF ITS KIND

ARMSTRONG PRODUCTS CORP.
Quality Since 1899
Dept. BP Huntington 12, W. Va.



QUALITY . . . *a tradition with Madden Brass Fittings*

For the "tops" in quality, use Madden brass fittings on LP Gas and other industrial applications. They are precision-machined of highest quality material. It costs so little to have the best . . . Madden.

Write for Complete Catalog C-7

MADDEN BRASS PRODUCTS CO.
1111 N. FRANKLIN ST. CHICAGO 10, ILL.

Houston, distributor for the Chambers Corp., Shelbyville, Ind.

Mr. Clarac, who has been with the company as sales representative for the past four years, will supervise promotional activities on built-in and console-type models in 92 counties in southern Texas in which his firm represents Chambers.

1450 Pyrofax Gas Distributors Attend Annual Meeting

More than 1450 members of Pyrofax Gas Co.'s distributor organization attended conventions at hotels in eight cities during February.

Plans for 1952 were outlined by the sales, service, and advertising managers of the company. Appliance representatives demonstrated the latest features of their 1952 line of gas appliances specially designed for use with "Pyrofax" gas.

"Pyrofax" gas has been used in homes, farms, restaurants, and resorts for cooking, water-heating, refrigeration and many other uses since 1923. This year will be the 26th year the annual meetings have been held since the company was founded.

Fuel Shortages Discussed At Texas Mid-Winter Meeting

A survey committee, to be appointed shortly by Texas Butane Dealer Assn. President Gene Bumpus, will make a study and draft recommendations on the best means of meeting changing fuel supply conditions. This move came about as a result of a mid-winter meeting of the membership in Fort Worth and the group's determination to find a solution for spot shortages of fuel that occur periodically.

With 203 members registered for

the closed meeting, the first of its kind in the state, the session revealed that dealers are anxious to discuss their problems more frequently than at the once-a-year convention in June.

A panel, made up of J. H. Winton, A. A. Pickens, W. E. Fraley, Tom W. Cadenhead, with Bill Lawson as moderator, lead the round-table discussions. Individual participation in the program was enthusiastic as non-panel members presented questions and problems to the panel for such solving as is available before the study is completed.

Will Survey Whole Situation

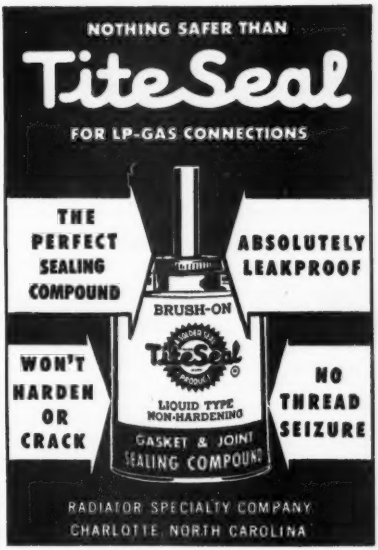
The first need, it was determined, was that the entire fuel setup would have to be surveyed: total production of butane and propane gases; total consumption; and finding whether or not a margin may exist between production and consumption and at what time of the year such a surplus occurs. This would be followed by a study of the storage program of surplus gas.

Suburban Propane Testing Salt Dome Area for Storage

Suburban Propane Gas Corp., Whippany, N.J., has started tests south of Syracuse in the western New York salt-dome area to explore the possibilities of storing LPG in old salt mines.

Mark Anton, president, told a meeting of the Philadelphia Securities Assn. that drilling tests have been under way since late November and the first casing has been moved to the site.

The underground-storage reservoir is expected to enable the company to store up to 1,000,000 gals. of propane during summer months in preparation for heavy winter demands.



First See

GRIFFITHS

for

Conversion Parts

We can supply a wide assortment of spuds, orifices and other parts for converting domestic and commercial equipment to any type gas. Also, a complete line of repair parts for all types of gas meters.

Write for catalog.

E. F. GRIFFITHS COMPANY

350 E. Walnut Lane, Philadelphia 44, Pa.

Serving the Gas Industries For Over 40 Years

CLASSIFIED

Classified advertising is set in 6 point type, without border or display, at the rate of 15 cents per word per insertion, minimum charge per insertion $3. Box numbers for replies count as 5 words. Count as a word each one letter word and each group of figures. Classified advertising is only accepted when payment accompanies order. Copy and payment must reach publisher's office prior to 10th of month preceding publication.

SITUATIONS WANTED

MAN WITH BROAD EXPERIENCE since 1926 in Propane, bulk and bottles, domestic and all types of heating. Also licensed master plumber. Attended two semesters University Minnesota fuels and their combustion. Experienced in selling, meeting the public and training employees. Sober and industrious. Wife and I willing to go to any part of U.S. or Canada. Guaranteed performance. Write or wire, Box 635, BUTANE-PROPANE *News*, 198 So. Alvarado, Los Angeles, Calif.

BUSINESS OPPORTUNITIES OFFERED

FOR SALE—BUTANE & PROPANE bulk plant. Over 60,000 gal. storage. Clear of debt. With tractor business. Over 90 house tanks in stock, over 750 customers. Would trade for land or rental property. J.D. Tate, Grenada, Miss. Phone 1098M.

ESTABLISHED BOTTLED GAS BUSIness in central New England. Nearby supply, good volume, with or without real estate. Write Box 615, BUTANE-PROPANE *News*, 198 So. Alvarado, Los Angeles, Calif.

FOR SALE—WELL ESTABLISHED L-P gas and appliance business in town of 35,000 in central Kansas. Two tank trucks, three installation and service trucks. 10,000 gallons storage. All franchises on natural gas, L-P, oil and electric appliances. Nationally known merchandise. Must sell partnership dissolution. Will sell at inventory. Part down, 5 years on balance. Write Box 625, BUTANE-PROPANE *News*, 198 So. Alvarado, Los Angeles, Calif.

BUSINESS OPPORTUNITIES OFFERED—Cont.

FOR SALE—WELL ESTABLISHED GAS business in Western Kentucky. Approximately 600 customers, (500 bottle, 100 bulk). One 1250-gal. twin tank delivery truck and one ½-ton pickup. 6,000-gal. bulk plant and clean stock of merchandise. No natural gas. Write Box 640, BUTANE-PROPANE *News*, 198 So. Alvarado, Los Angeles, Calif.

BELGIAN COMPANY, LEADING LPG cylinder manufacturers, wish to appoint selling agents on commission basis for [illegible] Southeast (preferably Texas), Middlewest (preferably Illinois) and Northeast. Write with full particulars Box 620, BUTANE-PROPANE *News*, 198 So. Alvarado, Los Angeles, Calif.

LEVEL OUT YOUR SALES BY ADDING a Florida LP business to your present operations. The Florida market is rich, growing and profitable. Tho' difficult to secure, we nevertheless specialize in LP businesses which have passed our rigid inspection. Edw. R. Goudie, Dept. B-P, 200 Phipps Plaza, Palm Beach, Fla.

BUSINESS OPPORTUNITIES WANTED

MANUFACTURERS REPRESENTAtive covering Texas and Louisiana gas companies, butane dealers, plumbing and hardware jobbers wants line of water heaters, ranges, valves, fittings or kindred products to augment high class heating line. Advertiser well known to above trade. Maintains centrally located office—warehouse available. Commission only. Write Box 645, BUTANE-PROPANE *News*, 198 So. Alvarado, Los Angeles, Calif.